Depictive Secondary Predication and Quantization

Jake Andrew Farrell

ORCID: 0000-0003-3383-3837

Master of Arts

March 2017

School of Languages and Linguistics

University of Melbourne

Submitted in total fulfilment of the requirements of the degree of Master of Arts

Abstract

This thesis analyses depictive secondary predicates and their restrictions. Depictives can be predicated of either the subject or object of a clause (e.g. *John$_i$ ate the fish drunk$_i$* vs *John ate the fish$_j$ raw$_j$*). These types are known as Subject-oriented and Object-oriented depictives respectively. Object-oriented depictives show more restrictions in their distribution than Subject-oriented depictives, e.g. *John$_i$ pushed Mary$_j$ drunk$_i$/$_{*j}$*. This depends on the verb class, and Object-oriented depictives are generally most acceptable when predicated of objects of accomplishment verbs. This restriction has led to the claim that Object-oriented depictives are unacceptable with non-accomplishment verbs. However, this is incorrect, and there are cases of Object-oriented depictives being acceptable with non-accomplishment verbs, like e.g. *John pushed the cart$_j$ loaded$_j$*. This thesis addresses this variable acceptability, and presents an account that captures and explains the difference in acceptability of Object-oriented depictives with different verb classes.

The variable acceptability of Object-oriented (adjectival) depictives with objects of activity verbs depends on the type of adjective scale used, and this is ultimately due to the depictive's sensitivity to quantization. Since quantization surfaces in various domains (e.g. Mass/Count in nominal, telic/atelic in verbal, Closed/Open scales in adjectival, Stage-Level/Individual-Level predicate in the predicative domain), this predicts that depictive acceptability should interact with changes in these domains, which is shown to be borne out. This can be extended to interactions with lexical aspect more generally, which captures the variable acceptability of Object-oriented depictives with different verb classes. Based on this, this thesis poses the Depictive Aspectuality Constraint: Object-oriented depictives and the sentence they are contained within must be aspectually compatible with durativity and quantization. This constraint gives a greater empirical coverage of depictive behaviour than previous analyses, and successfully predicts and explains previously unnoticed interactions of depictives with other domains.

Declaration

This is to certify that

1. the thesis comprises only my original work towards the Master of Arts,
2. due acknowledgement has been made in the text to all other material used,
3. the thesis is less than 50,000 words in length, exclusive of tables, maps, bibliographies and appendices.

Jake Farrell, March 2017

Acknowledgements

Many thanks to my supervisors, Brett Baker and Lesley Stirling. Their support and depth of knowledge have been absolutely crucial, and I am grateful for their insight.

Thanks to Justin Colley, who has been extremely helpful and encouraging, and has gracefully weathered countless hours of discussion.

And finally, to my wife Cara, who has been an endless fount of support. This thesis could not have been written without you.

Contents

List of Tables

List of Figures

Chapter 1

Overview

A puzzling fact about language is that there are certain constructions that we would expect to be acceptable, which nonetheless aren't. In order to approach an explanation of this behaviour, it is first important to accurately describe the restrictions that these constructions face. This highlights a difficulty in linguistic theory, namely discovering what governs acceptability in a language, and how it can vary. Acceptability judgements – whether elicited or inferred from presence in corpora – form the raw data that linguists work with, and it is vitally important that we understand why something may or may not be an acceptable sentence of a language.

A simple example is that of 'grammatically correct' but 'meaningless' sentences, such as #*Colorless green ideas sleep furiously* from Chomsky (1957). Syntactically the sentence is fine,[1] but semantically is problematic, as something cannot be both colorless and green, nor can ideas sleep furiously. Similarly, a sentence with more than three levels of centre-embedding is generally unacceptable in natural speech due to its syntactic complexity—it can be understood written out, but with some difficulty. As a final example, we can consider #*John slept the baby*, which has an interpretable meaning (John made the baby sleep), but is presumably unacceptable because *slept* is felt to be an intransitive verb. While these are all unacceptable sentences, they differ in relative acceptability as well as the reasons for their unacceptability.

A natural explanation for this would be to say that there are different violations in the sentence: in whether the sentence is semantically or syntactically unacceptable, or whether the sentence is too complicated for a hearer to process, or whether something is pragmatically unacceptable. This is a very useful division, but depends on how one assigns the various behaviours of language to its component parts, and how those component parts interact. A consequence of this is that when one is trying to describe and explain the (un)acceptability of sentences, it is necessary to have a theory that provides the right tools to capture this in an elegant and principled manner.

A theory of human linguistic ability, then, needs to identify what components are important in generating and understanding sentences, and how these can interact with each other. If we can identify a particular component – or subcomponent – of how language is structured, then this allows us to investigate how these might be used in order to explain acceptability. The upshot of this approach is that we may find that several, seemingly disparate areas can be related by a single, underlying grammatical basis. If differences in acceptability can be explained by a more general fact about how language works, then this is an improvement in the simplicity and power

[1] Traditionally it would be called 'well-formed', following notions of formulas from logic and formal language theory. However, there are various reasons for avoiding this terminology today, and so I abstain from using it here. For a discussion of some of the issues, see Ott (2010).

of our theories about language. In terms of minimal and elegant, we mean a theory that integrates itself into other known findings of how language works, and relates these restrictions together in the least complex way possible.

To this end, in this thesis I explore the restrictions on the behaviour of depictives in English, and what governs their acceptability. Depictives are a subclass of secondary predicates, and are an 'extra' or second predicate beyond the usual one. For example, the following sentences contain adjectival depictives:

(1) a. John$_i$ ate the fish [drunk$_i$]

b. John ate the fish$_i$ [raw$_i$]

In these cases, the adjectival depictive describes a property which holds of the entity it is predicated of during the time of the event of the matrix clause. Importantly, we can see that depictives can either be Subject-Oriented (1a) or Object-Oriented (1b). The focus of this thesis will be on adjectival depictives and their behaviour, which has proven difficult to accurately capture. This difficulty has lead to many incorrect generalisations about depictives. For example, a particularly famous property of depictives is their preference to be Stage-Level Predicates (SLPs), as compared to Individual-Level Predicates (ILPs) (2). This preference is so strong, that it has lead some researchers to say that depictives can only be Stage-Level Predicates. However, Individual-Level Predicates can still serve as depictives (3):

(2) a. ??John$_i$ sat in the car blond$_i$ [ILP]

b. John$_i$ sat in the car drunk$_i$ [SLP]

(3) John died poor

Providing a correct explanation of depictives is compounded by the fact that Subject-Oriented and Object-Oriented depictives behave differently; Object-Oriented depictives predicated of objects of certain verb classes show restrictions that their Subject-Oriented counterparts do not have:

(4) a. John$_i$ pushed Mary$_j$ drunk$_{i/??j}$ [activity]

b. John$_i$ noticed the dog$_j$ scared$_{i/??j}$ [achievement]

c. John$_i$ ate the meat$_j$ dry$_{i/j}$ [accomplishment]

Like the Stage-Level Predicates above, the strength of this has lead to the claim that Object-oriented depictives are unable to be predicated of objects of activity verbs. But while there is a restriction, some Object-Oriented depictives are still acceptable with activity verbs (5):

(5) a. *John carried the cart$_i$ broken$_i$

b. John carried the cart$_i$ full$_i$

In short, we have a puzzling set of sentences that contrast in acceptability. Explaining this variable acceptability, especially of Object-Oriented depictives, will be the major aim of this thesis. As such,

the first task is to adequately describe the variable acceptability. Reviewing previous accounts, I will show how these accounts have difficulty in capturing the relevant data, before putting forth my own account that has greater empirical coverage. I argue that depictives are sensitive to *quantization*. This sensitivity especially affects Object-Oriented depictives due to their association with the object of the sentence, which is involved in measuring out the event.

Quantization is an important concept in theoretical semantics, and cuts across the nominal, verbal, adjectival, and predicative domains. By focussing on how quantization affects the acceptability of adjectival depictives, I will demonstrate how the aforementioned restrictions can be unified, and how quantization reveals larger facts about depictives and their relationship to lexical aspect. In short, I will show how the various interactions and restrictions of depictives are due to this underlying sensitivity to quantization.

Using quantization, I give my own novel analysis of depictives that not only accounts for the variable acceptability in (4) and (5), but also unites several seemingly unrelated facts about depictives. I demonstrate that introducing quantization into the overall construction can be used to 'repair' the acceptability of depictives. An important finding of this thesis is that this repairing effect can be achieved through multiple means, since quantization underlies distinctions in several domains (e.g. Mass/Count in the nominal domain, telic/atelic in the verbal); the overall construction is sensitive to quantization, but the manner in which quantization is introduced seems irrelevant, only that quantization is present.

The method by which this is mediated could radically differ depending on the syntactic and semantic frameworks assumed. In order to not tie my analysis to particular mechanisms of a given framework, I have steered away from giving my own, explicit formal analysis of how quantization can affect depictive acceptability through different domains. Instead, I give a preformal analysis, and focus on the properties that a framework would have to account for in order to adequately capture the behaviour of depictives.

The thesis is laid out into five chapters. In chapter 2, I look at depictives in-depth, and show their syntactic and semantic properties. I review the empirical data and previous explanations for their behaviour, and show how there is still much to be explained. The main focus of this chapter will be to provide a clear definition for what counts as a depictive, and to catalogue its properties and important factors of its behaviour that are relevant to formulating a proper description of depictives. In particular, I highlight Object-Oriented depictives and how their variable behaviour has either been ignored, or has not been properly captured by previous accounts.

In chapter 3, I present a new analysis of depictives. I focus on the variable acceptability of adjectival Object-Oriented depictives predicated of objects of activity verbs, and show how this reveals a deeper fact about depictives and their properties. I use the concept of *adjective scales* to show how this variable acceptability is determined by the type of scale of the adjective used: *closed scale* adjectives are more acceptable as Object-oriented depictives than *open scale* ones. I will show that this distinction between open and closed scales is related to the quantization/homogeneity distinction, which also underlies the telic/atelic distinction in the verbal domain, the Mass/Count distinction in the nominal domain, and the Stage-Level/Individual-Level predicate distinction.

Using the quantization/homogeneity distinction, in chapter 4 I revisit the various properties of de-

pictives discussed in chapter 2, and show how they can be explained by the depictive's relationship with quantization. With quantization as a basis, I give an analysis of variable depictive acceptability that has greater empirical coverage than other accounts. I also show how my account predicts that acceptability of a depictive can be improved by introducing quantization into the sentence, and this prediction is borne out. Importantly, I show that quantization can be introduced into the sentence through a number of different domains (e.g. nominal, verbal, adjectival, predicative), and this leads to a corresponding increase in acceptability of depictives.

Based on these data, I propose an aspectual restriction on depictives, the *Depictive Aspectuality Constraint*. This constraint shows that these properties are in fact all intimately related to aspectual properties of the depictive and the matrix clause it is attaching to. I then extend this constraint to explain the behaviour of adjectival Object-Oriented depictives with different verb classes more generally, and show how this correctly predicts previously overlooked interactions of Object-oriented depictives with achievement verbs.

In chapter 5, I conclude and discuss future research directions.

Chapter 2

Depictive secondary predication

Depictives are a subclass of secondary predication. The signature trait of secondary predication is the addition of another predicate that attributes a further property that holds of some element of the main clause it is added to:[1]

(1) a. John$_i$ drove home angry$_i$ [Depictive]

b. Mary painted the house$_i$ red$_i$ [Resultative]

In both of these sentences, an 'extra' - or second - predicate is present, which adds further information about the process or result of the main clause. Importantly, they differ in the manner in which the secondary predicate affects the main clause. In depictives, the secondary predicate introduces an additional property that holds during the entirety of the event. In (1a), John has the property of being angry during the event of driving home. In contrast, for resultatives the addition of the secondary predicate introduces a result state which is achieved through the process described in the sentence, such as in (1b) - the process of Mary painting the house results in the house becoming red. From this difference, secondary predicates are categorised into two different types:[2] depictives, (1a), and resultatives, (1b).

Secondary predication can differ substantially across languages, which is an issue that is compounded by the difficulty in distinguishing secondary predication from similar constructions. As such, a large problem in tackling depictives is first identifying what counts as a depictive. A result of this is that, multiple researchers have introduced different definitions of what counts as a 'true' depictive secondary predicate, and in many cases, these are conflicting, and depend on the theoretical analysis the authors adopt.

A consideration of the theoretical analysis used for secondary predicates is especially important, as a key aim of theorists working on secondary predication is to integrate secondary predicates into a larger account of predication. As such, they often serve as a test-bed for distinguishing between different accounts of predication. I will follow the seven criteria for depictives given by Schultze-Berndt and Himmelmann (2004, pp. 77-78) as a pretheoretical definition of a depictive:

(i) It contains two separate predicative elements, the main predicate and the depictive, where

[1] The index indicates what the secondary predicate is predicated of. I will omit this in cases where the relationship is unambiguous, or the orientation of the depictive is specified.

[2] The terms come from Halliday (1967), which is the earliest detailed description of the phenomena (though there are earlier mentions, e.g. Jespersen, 1954). Halliday also outlines a third type of secondary predicate, the circumstantial (also known as a conditional). However, I will argue that this is a type of depictive.

the state of affairs expressed by the depictive holds within the time frame of the eventuality expressed by the main predicate.

(ii) The depictive is obligatorily controlled, i.e., there exists a formal relation to one participant of the main predicate, the controller, which is usually interpreted as a predicative relationship (i.e., the depictive predicates an eventuality of the controller). The controller is not expressed separately as an argument of the depictive.

(iii) The depictive makes a predication about its controller which is at least in part independent of the predication conveyed by the main predicate, i.e., the depictive does not form a complex or periphrastic predicate with the main predicate.

(iv) The depictive is not an argument of the main predicate, i.e., it is not obligatory.

(v) The depictive does not form a low-level constituent with the controller, i.e., it does not function as a modifier of the controller.

(vi) The depictive is non-finite (to be understood as: not marked for tense or mood categories), or the dependency of the depictive on the main predicate is indicated in other formal ways.

(vii) The depictive is part of the same prosodic unit as the main predicate.

While I will define depictives based on cross-linguistic considerations, I will concentrate on depictives in English for this thesis. I do this because even though English is one of the most well-studied of languages in regards to secondary predication, there have been a number of common claims about depictives in English that, as mentioned in the previous chapter, appear not to be warranted. This is especially important as English provides a useful first case for dividing up data about depictives, as depictives can be more readily distinguished from other, related constructions that are not so clearly distinguished in other languages.

Given this, the syntactic and semantic properties of the depictive need to be considered. In this chapter, I will review depictives and their properties. In order to continue a more in-depth analysis of the properties of depictives, there are a number of questions that need to be answered about depictives. I divide these into syntactic and semantic questions, looking at both in turn. Syntactically, the position and how the depictive is integrated into the sentence needs to be decided:

1. are depictives adjuncts or complements?
2. what projection do they attach to?
3. what (if anything) mediates the predicative relationship between the depictive secondary predicate and the main predicate?

Semantically, the depictive is associated with the main predicate, though to what extent they need to match and what the depictive contributes semantically is important:

1. what are the possible semantic restrictions on depictives?
2. how does the depictive align temporally with the matrix event?
3. are depictives required to be interpreted in particular way?

I look at these questions in turn. I focus first on the basic distributional data of depictives, before considering related constructions and how they are distinguished from depictives. I then look further in-depth at the syntax of depictives, especially in regards to the position of depictives in the syntax tree, and the questions laid out above. I then consider the semantics of the depictive construction, and how depictives add properties to an entity of the main clause. Finally, I lay out the basic framework I will be adopting in my analysis of depictives, and pose two main questions that I seek to answer in this thesis.

2.1 The distribution of depictives in English

To begin, it is useful to look at the general distributional data for depictives in English. Perhaps most importantly, depictives can be predicated of either the subject or the object of a sentence:

(2) a. John$_i$ saluted Mary drunk$_i$

b. John saluted Mary$_i$ drunk$_i$

The former is a *Subject-Oriented Depictive* (SOD), while the latter is an *Object-Oriented Depictive* (OOD), and referred to generally as depictives. Depictives can be APs, PPs, or DPs[3]

(3) a. Mary$_i$ drove home [$_{AP}$ drunk]$_i$

b. James$_i$ left the meeting [$_{PP}$ in tears]$_i$

c. James$_i$ returned [$_{DP}$ a blonde]$_i$

Adjectival depictives are the most common type of depictive and are generally far freer in their distribution than depictives of other types. PP depictives are the next most common, though show some restrictions that adjectival depictives do not. DP depictives are much rarer, and tend to be the most restricted in their distribution. Unlike adverbs, depictives of all types cannot precede the verb, and a depictive must follow the NP arguments of the main clause:

(4) a. *He drunk drove the car

b. He drunkenly drove the car

(5) a. *He ate drunk the meat

b. *He ate raw the meat

Depictives can follow or precede PPs when the main verb is intransitive. When the main verb is transitive, the OODs can follow or precede PPs, but SODs are preferred following the object:

[3] Theorists appear to differ on whether there are VP depictives (e.g. Williams, 1975; Truswell, 2007; Asada, 2012) or not (e.g. Aarts, 1995; Rothstein, 2004). Rothstein (2006) notes that some participial modifiers may be considered secondary predicates.

(6) a. John running naked into the room was a mistake

b. John running into the room naked was a mistake

(7) a. (i) He returned the meat$_i$ to the butcher raw$_i$
(ii) He returned the meat$_i$ raw$_i$ to the butcher

b. (i) He$_i$ returned the meat to the butcher naked$_i$
(ii) ??He$_i$ returned the meat naked$_i$ to the butcher

The argument predicated of must be syntactically present, and implicit objects and implicit agents of passives are not acceptable:[4]

(8) a. (i) John ate (the meat)
(ii) John ate *(the meat$_i$) raw$_i$

b. (i) He$_i$ rented the car to John drunk$_i$
(ii) *The car was rented to John drunk

Depictives are within the scope of negation, as compared to appositive adjectives:

(9) a. John didn't arrive drunk

b. John didn't arrive, drunk

This can be seen in the difference in meaning for the above sentences. The sentence in (9a) can only mean that John either wasn't drunk when he arrived, or that he didn't arrive at all. Compare this to (9b), in which the pause in intonation (represented orthographically by the comma) allows for the appositive adjective *drunk* to give the reason for why John didn't arrive. Likewise, depictives are in the focal domain (Winkler, 1997).

While depictives can generally be predicated of any bare DP inside a VP, OODs have a number of syntactic restrictions that SODs don't. OODs must precede nonfinite VP adjuncts (10a), and cannot be predicated of prepositional objects (10b):

(10) a. (i) Eating the meat$_i$ raw$_i$ to impress their friends was a poor choice
(ii) *Eating the meat$_i$ to impress their friends raw$_i$ was a poor choice

b. (i) John stuffed the meat$_i$ into the car raw$_i$
(ii) *John stuffed the car with meat$_i$ raw$_i$

OODs also behave in interesting ways with double object constructions—while ditransitives can have their direct object predicated of, it is often claimed that indirect objects cannot be predicated of:

[4] But as Stroik (1992, 132, fn. 7) notes, this seems to be variable:

(i) a. The room was left sad

b. That painting was painted blindfolded

(11) a. I gave John the meat$_i$ raw$_i$

b. *I gave John$_i$ the meat hungry$_i$

However, this restriction is not entirely accurate, since it does not always hold. When using *give* as a light verb, the indirect object is predicable of:

(12) a. The nurse gave the patient$_i$ his medication still-groggy$_i$/half-asleep$_i$

b. Victorian doctors preferred to give their female patients$_i$ a physical exam fully-dressed$_i$
(Example from Maling, 2001)

Further, if the object is moved as in the unaccusative form, or the passive or pseudopassive form, then the moved entity can be predicated of (M. Koizumi, 1994):

(13) a. (i) He$_i$ got t the news drunk$_i$
(ii) *I gave him$_i$ the news drunk$_i$

b. (i) I$_i$ was told the news drunk$_i$
(ii) *He told me$_i$ the news drunk$_i$

c. (i) Mary$_i$ was talked to drunk$_i$
(ii) *I talked to Mary$_i$ drunk$_i$

This raises two main questions; what is the structure of depictives, and how do they attach to the main sentence? To formulate an answer to these questions, it is first useful to look at related constructions for clues about the structure and interpretation of depictives. By identifying the class of constructions that depictives belong to and contrasting them, we can reveal more information about specific syntactic and semantic properties of depictives.

2.2 Depictives as Participant-Oriented Adjuncts

Himmelmann and Schultze-Berndt (2005) note that depictives are very similar to other constructions, such as *circumstantials*, *participant-oriented manner adverbials* and *weak free adjuncts*. They classify depictives along with these constructions as being a part of the general class of *participant-oriented adjuncts*. By participant-oriented, it is meant that depictives are particularly about the entities they are predicated of, as compared to being predicated of an event that the entities are involved in. Consider:

(14) John$_i$ saluted drunk$_i$

Here, *drunk* adds further information to the base sentence *John saluted*, but in a manner that is different from usual adverbial modification. While it does not fundamentally change the overall event, it crucially specifies something about the entity of which the depictive is predicated. To see this, compare (14) with (15):

(15) John saluted drunkenly

The adverb *drunkenly* differs from the depictive *drunk* in that the former describes and modifies the event, whereas the latter has a tighter link to the participant; the adverb can be used to describe a situation in which John is pretending to be drunk or performs the action in a drunken manner (e.g. as an actor), whereas the depictive is only licit in cases where John is actually drunk:

(16) a. John saluted drunkenly... but of course he was actually sober

b. He saluted drunk... #but of course he was actually sober

While differing from adverbs in an important way, depictives are still adjuncts. The evidence for the adjunct status of depictives comes from a number of different bases.[5] First of all, as a classic sign of adjuncthood, more than one depictive can appear in a sentence:

(17) a. John ate the meat$_i$ raw$_i$ tender$_i$

b. John danced the tango naked$_i$ drunk$_i$

Second, depictives are always optional. To illustrate this, a useful comparison is a related construction that shows similar behaviour (but is not a part of the participant-oriented adjuncts class): the predicative complement construction. Predicative complements are similar to depictives in that they relate a secondary element to the main predicate of a sentence. However, crucially, this second element is not optional and appears to be subcategorised for:

(18) a. Rocks serve them [as support]

b. Mary prefers her coffee [black]

Given a lack of overt morphological differences, predicative complements can be difficult to distinguish from depictives, and in many languages it appears there is no clear distinction. However, Bucheli Berger (2005) shows evidence of a generalised depictive marker in Swiss German dialects which is not found on predicative complements, suggesting that they are distinct constructions. Depictives can also often be predicated of either the subject or the object of the main clause, which shows a much freer distribution than would be expected from a complement.[6]

When analysing depictives, it is important to be able to identify what counts as a depictive and what is merely a similar construction. In this section, I will compare depictives to the other members of the class of participant-oriented adjuncts. Identifying the similarities and differences of these constructions reveals more information about the structure and use of depictives, and gives us a better idea of the syntactic and semantic properties that depictives have.

---

[5] Though theorists differ over this question, with some maintaining that depictives are solely adjuncts (e.g. Carrier and Randall, 1992; Chomsky, 1981; Dowty, 1979; Goldberg, 1995; Green, 1973; Rothstein, 1983; Williams, 1980; Winkler, 1997), and others arguing that some depictives are complements (e.g. Halliday, 1967; Napoli, 1989; Nichols, 1978; Simpson, 2005).

[6] Also see Simpson (2005), who argues that the evidence for the adjuncthood of depictives can be weakened by analysing the selectional restrictions of English depictives in comparison to depictives in Warlpiri. She presents an argument that the secondary predicate in sentences like *They returned drunk* should be analysed as a complement.

2.2.1 Circumstantials and free adjuncts

Circumstantial secondary predicates[7] appear to be very similar to depictives, with the semantic differences being slight. The main noted difference is that depictives 'purely' have temporal overlap between the events of the main predicate and the secondary predicate, whereas circumstantials appear to contain further 'semantic links' that go beyond this relationship, and originate from the secondary predicate. Nichols (1978) divides these 'semantic links' up into the subtypes of *condition*, *concession*, and *temporal*:

(19) a. I can work hungry [condition]

b. Even dead I won't forget [concession]

c. I knew him young [temporal]

While circumstantials are very similar to depictives they behave differently under negation and focus. In terms of negation, depictives can have either the main and secondary predicate negated, or just the secondary predicate by itself:

(20) a. John$_i$ didn't arrive drunk$_i$

b. (i) John arrived and he wasn't drunk
(ii) John didn't arrive at all

In contrast, in the circumstantial it is possible to negate just the main predicate without negating the secondary predicate:

(21) John$_i$ can't work hungry$_i$

In (20), the depictive is within the domain of negation, so the only two possible readings are that John either wasn't drunk when he arrived, or he didn't arrive at all. Compare this to (21), in which *hungry* denotes the circumstance in which John can't work.

Authors differ on whether circumstantials are a subtype of depictives, or their own class. Simpson (1983), for example, argues that circumstantials are another type of secondary predicate, whereas others suggest that they are essentially depictives under the scope of a modal operator (Himmelmann & Schultze-Berndt, 2005; Simpson, 2005; Rothstein, 2006). This relationship is further complicated by the introduction of the free adjunct construction, which is strikingly similar to circumstantials. Free adjuncts are sentence-level adverbials that lack an overt linker to the main clause. Free adjuncts can be split up into *strong* and *weak* subtypes, following Stump (1985):

(22) a. Having unusually long arms, John can touch the ceiling [strong]

b. Standing on a chair, John can touch the ceiling [weak]

[7] Circumstantials are also known as conditionals (Halliday, 1967), or 'appositive depictives' (Motut, 2010). It should be noted that 'circumstantial' and 'conditional' are both used for a number of different things through the related literature. Halliday's use of 'circumstantial' refers to the group consisting of beneficiaries, range, attributives, and his version of circumstantials (which he calls conditionals). Some authors use circumstantial to refer particularly to object-oriented depictives.

Strong and weak free adjuncts differ in a number of respects. First and foremost, strong free adjuncts are outside the clause headed by the primary predicate, and so are not secondary predicates. They also differ in entailment strengths; the strong free adjunct is always entailed by the truth of the whole sentence, whereas this is not always the case for weak free adjuncts (Stump, 1985, p. 41). The difference seems to stem from the meaning of the adjunct. It is proposed that weak free adjuncts are derived from Stage-Level Predicates (SLPs), whereas strong free adjuncts are derived from Individual-Level Predicates (ILPs). SLPs are temporally restricted states that holds of a particular time, whereas ILPs denote more permanent properties (Kratzer, 1995). This shows another similarity to depictives, which prefer SLPs over ILPs:

(23) a. Mary arrived eager

b. *Mary arrived intelligent

Weak free adjuncts pattern very closely to circumstantial secondary predicates, and Himmelmann and Schultze-Berndt (2005) propose that circumstantials and weak free adjuncts are the same construction.[8]

2.2.2 Participant-Oriented Adverbs

In depictives the attributed property holds specifically of the predicated entity of the depictive during the event in the main clause, and can't hold of just the event itself. This is different from adverbial modification, in which the adverb can modify the entire event:

(24) a. John drove home angrily, but he was only pretending

b. #John drove home angry, but he was only pretending

In the adverbial form, (24a), it can be that the event of John driving home took place while John was merely pretending to be angry. Compare this to the depictive, (24b), where John actually has to be angry during the event of driving home, and suggesting otherwise renders the sentence infelicitous. This is similar to nominal modification, where the depictive predicate must hold for the entirety of the event, but the nominal modifier need not:

(25) a. The angry man drove home, after he had calmed down

b. #The man drove home angry, after he had calmed down

While this is a useful split, it is not a cut and dried distinction. Jackendoff (1972) notes that certain adverbs can occupy positions in a sentence which causes a distinct change in their meaning, while others don't:

(26) a. (i) John quickly dropped his cup of coffee
(ii) Quickly, John dropped his cup of coffee
(iii) John dropped his cup of coffee quickly

b. (i) John cleverly dropped his cup of coffee

[8] But see Rothstein (2011) for an argument to the contrary.

(ii) Cleverly, John dropped his cup of coffee
(iii) John dropped his cup of coffee cleverly

In (26a), *quickly* shows no real change in meaning, whereas in (26bi), the sentence is ambiguous between the two readings of (26bii) and (26biii), which can be paraphrased respectively as:

(27) a. It was clever of John to drop his cup of coffee

b. The manner in which John dropped his coffee was clever

Jackendoff distinguishes these as *subject-oriented*[9] (27a), and *manner* adverbs (27b). Following Geuder (2000), these are *oriented adverbs*, and form part of the class of participant-oriented adjuncts. Oriented adverbs can be further split into *transparent*, *agentive*, and *result* adverbs:[10]

(28) a. John *stupidly* answered the question [transparent]

b. John *angrily* broke open the door [agentive]

c. John loaded the cart *heavily* [result adverb]

Oriented adverbs are participant-oriented like depictives, but differ in a number of ways depending on their subclass. Result adverbs, (28c), differ in having a result relation in their interpretation, which is clearly different from depictives. Agentive adverbs, (28b) are only found at the beginning of the sentence or prior to the auxiliary in English, whereas depictives generally follow the first predicate. Depictives further differ in that they can refer to participants that aren't the agent, and don't predicate over the state of affairs. For example:

(29) a. (i) John answered the question stupidly [pure manner]
(ii) It was stupid of John to answer the question

b. (i) John answered the questions drunk
(ii) ??It was drunk of John to answer the question

Finally, transparent adverbs (28a) differ from depictives in that "depictives assert the independence of a concurrent state while the adverbial forms assert the existence of a closer factual connection to the event." (Geuder, 2000, p. 213). Consider:

(30) a. The boy$_i$ returned to his parents hungry$_i$

b. The boy hungrily returned to his parents

(Example adapted from Geuder, 2000)

---

[9] Also known as agent-oriented, e.g. Ernst (2002).

[10] Geuder uses the term resultative. But since this invites confusion with resultative secondary predicates, I use the term result adverb instead. Geuder also distinguishes another type of adverb as being a *pure manner* adverb, which makes up the *manner adverb* class along with transparent, agentive, and result adverbs. Pure manner adverbs, however, are event-oriented adverbs, and so are distinguishable from depictives and the rest of the participant-oriented adverbs.

In (30a), the state of the boy being hungry merely overlaps with the event described in the main clause. Compare this to (30b), where there is an apparent motivational link between the adverb and the event of returning.

Given the relatedness of these constructions, this provides further support for the view that depictives are adjuncts, but form a distinct construction from the others. The broad conclusion I draw from this is that depictives form part of the overall class of participant-oriented adjuncts, and have similar syntactic and semantic properties that are shared with the rest of this class. This goes some way to explaining the difficulty of distinguishing depictives in other languages that don't show overt differences, as well as providing a basis for investigating the depictive construction.

2.3 Syntactic properties of depictives

I now turn to a deeper consideration of the syntax of the depictive construction and its various properties and interactions with the structure of the sentence it is integrated into. Notably, SODs and OODs differ in their distribution and restrictions, and so an important question is where SODs and OODs are attached within the syntax tree. We can see that long distance *wh*-extraction results in unacceptability, showing depictives behave like adjuncts, as we concluded in the previous section.

(31) a. *How raw$_i$ does Mary wonder whether John ate the meat$_i$?

b. *How drunk$_i$ does Mary wonder whether John$_i$ ate the meat?

While the exact position of the OOD has been debated, it is generally accepted that they are adjoined somewhere within the VP,[11] though accounts do differ between whether this is at a bar-level (e.g. Hornstein and Lightfoot, 1987; Bowers, 1993) or as a sister to the verb (e.g. Schein, 1995), or to the DP itself (e.g. Isac, 2005).[12] In contrast, theorists have differed much more substantively over the position of the SOD, with some theorists claiming that it is also inside the VP (e.g. Andrews, 1982; Culicover and Wilkins, 1984; McNulty, 1988; Roberts, 1988; Isac, 2005), while others have claimed it is outside the VP (e.g. Williams, 1980; Rothstein, 1983; Demonte, 1987, 1991; Nakajima, 1990; Schein, 1995; Bowers, 2001).

Andrews (1982) uses a variety of tests to suggest that SODs occur within the VP. He argues that VP preposing, *Though* movement, and *Wh*-clefting of the VP (pseudoclefting) show that the SOD is affected by operations targeting the VP, and so the SOD is within the VP. Applying his tests, if SODs were generated outside the VP, then we would expect the SOD and OOD to react differently to VP preposing and whether the depictive can be left behind:

(32) a. John wanted to leave the room happy and leave the room happy he did

b. *John wanted to leave the room happy and leave the room he did happy

[11] I use VP here to mean bare VP unless otherwise explicitly noted. Other discussions of the split between analysing SODs as being within or outside the VP often differ on whether they consider being inside the extended VP as being a part of the VP.

[12] Post Bare Phrase Structure (Chomsky, 1994), it is not clear how the distinction between adjoining at V′ and VP is maintained.

(33) a. John wanted to drink the beer flat and drink the beer flat he did

b. *John wanted to drink the beer flat and drink the beer he did flat

On the SOD external to the VP account, we would then expect the SOD (32b) to be acceptable, while the OOD (33b) would be unacceptable. However, as we can see, they're both unacceptable. Pseudoclefting tests and *Though* movement also show no difference between SODs and OODs:

(34) a. (i) *What John$_i$ did happy$_i$ was leave the room
(ii) What John$_i$ did was leave the room happy$_i$

b. (i) *What John did raw was eat the carrots
(ii) What John did was eat the carrots$_i$ raw$_i$

(35) a. (i) Eat the meat drunk though John did, nobody thought he was crazy
(ii) *Eat the meat though John did drunk, nobody thought he was crazy[13]

b. (i) Eat the meat raw though John did, nobody thought he was crazy
(ii) *Eat the meat though John did raw, nobody thought he was crazy

A further piece of evidence cited is the well-known fact that depictives are inside the domain of negation. Most importantly, SODs and OODs are both inside the scope of negation, and SODs do not show ambiguity like high attached adjuncts:

(36) a. Mary$_i$ didn't eat the meat naked$_i$ [SOD]

b. Mary didn't eat the meat$_i$ raw$_i$ [OOD]

c. Mary didn't eat the meat, deliberately [High attached adjunct]

As mentioned, it is generally agreed upon that there is a height difference between SODs and OODs, with the former being attached higher than the latter. This is supported by sentences with multiple depictives—they are subject to ordering conditions, and while SODs can follow OODs, OODs cannot follow SODs:

(37) a. John$_i$ ate the meat$_j$ raw$_j$ naked$_i$

b. *John$_i$ ate the meat$_j$ naked$_i$ raw$_j$

Likewise, SODs can be fronted, while OODs cannot.

(38) a. Furious$_i$, John$_i$ submitted the manuscript

b. *Incomplete$_i$, John submitted the manuscript$_i$

[13] On my judgement, I would mark this ??, especially if heavy focus is put on *drunk*.

Evidence from binding also provides support for a height difference, with a sentence being unacceptable if the pronoun is coindexed with its referent in the OOD:[14]

(39) a. *Mary met [him$_i$]$_y$ [angry about John$_i$]$_y$

b. *Sue met [him$_i$]$_y$ [proud about Fred$_i$]$_y$

Roberts (1988) argues that if the pronouns are c-commanding the referents, then Condition C will rule these out, explaining the unacceptability of the examples. Roberts also uses a similar argument involving reflexives and reciprocals to further show a height difference.

(40) a. *[Mary]$_x$ met John$_i$ [angry at himself$_i$]$_x$

b. Mary met [John$_i$]$_y$ [angry at himself$_i$]$_y$

In (40a), *John* cannot be the antecedent of the reflexive inside the SOD, but in the OOD in (40b), it can be. Roberts argues that this shows the SOD is outside the c-command domain of the object, *John*, whereas the OOD is inside. If the reflexive is flipped to be predicated of *Mary*, the judgements shift to the converse:

(41) a. [Mary$_i$]$_x$ met John [angry at herself$_i$]$_x$

b. *Mary$_i$ met [John]$_y$ [angry at herself$_i$]$_y$

In (41), *Mary* can be the antecedent of the reflexive inside of the SOD, but not the OOD. Sentences with reciprocals show the same contrast:

(42) a. (i) *[John]$_x$ met the students$_i$ [angry at each other$_i$]$_x$
(ii) John met [the students$_i$]$_y$ [angry at each other$_i$]$_y$

b. (i) [The students$_i$]$_x$ met John [angry at each other$_i$]$_y$
(ii) *The students$_i$ met [John]$_y$ [angry at each other$_i$]$_y$

Do-so replacement tests show that the VP is a constituent, and the OOD is inside the VP:[15]

---

[14] The following examples are from Roberts (1988). For binding examples only, I use brackets with x and y for depictive orientation, and usual index marks as traditionally used to indicate binding/coindexation.

[15] But these are variable. I have tested these sentences on other speakers and they find them marginally acceptable. I've also tested similar constructions, which they (and myself) find fully acceptable:

(i) a. John drank the beer warm and James did so cold

b. (Yesterday) John drank beer warm and James did so cold

What a *do-so* test shows depends on assumptions about the structure of the VP, and about phrase structure in general. If VPs can have more than one bar-level, and on the assumption that *do-so* proform tests replace V′ (Winkler, 1997, p. 29), then this is rather inconclusive about the placement in the VP. Alternatively, *do-so* is viewed as necessarily replacing elements inside the VP, but adjuncts adjoined to the VP need not be replaced (Lakoff & Ross, 1976; Zagona, 1988).

Ike-Uchi (1990) also notes that some *wh*-extractions of OODs are judged acceptable or marginally acceptable by many speakers:

(43) a. *Fred ate the meat raw, but I did so cooked (Simpson, 1983)

b. ?Julie drank the tequila cold, but Jem did so warm (Winkler, 1997)

We can compare this to resultatives and SODs. We can see that with *do-so* tests, OODs pattern closer to resultatives than SODs, where a resultative is standardly taken to be a complement to the verb:

(44) a. John fastened the shutters open, and Mary did so shut

b. *Jason wiped the table tired and Mary did so awake (Levin & Hovav, 1995)

This shows that the OOD is at a height between a SOD and a resultative. Where an OOD must be then depends on where a SOD attaches within the tree; if a SOD is inside the VP, then an OOD must be too.[16] Most importantly, the tests by Andrews (1982) do not always produce unacceptable sentences. For example, the SOD can be left stranded in the pseudocleft construction in some sentences, contrary to (34a).

(45) a. What John$_i$ did drunk$_i$ was drive the car

b. What John$_i$ did was drive his car drunk$_i$

Second, Nakajima (1990) argues that Andrews' tests can't be evidence for VP-internal adjuncts, as there are independent restrictions on stranding the SOD from the primary predicate. Nakajima argues this on the basis that temporal adjuncts can remain, whereas SODs cannot:

(46) a. John left the university at five o'clock, and Mary will, at six o'clock

b. *John drove home drunk, and Mary will, sober

Third, negative polarity items in OODs can be licensed by the subject, but they cannot be licensed in SODs by the object. On the assumption that the object is in Spec,VP (Hale & Keyser, 1993), then this shows that the SOD must be higher than the VP:

(47) a. No one$_i$ read the book [critical of anything else]$_i$

b. No one read newspapers$_i$ [hot off any press]$_i$

c. *John$_i$ read no book [critical of anything else]$_i$

(ii) a. How raw did John eat the meat?

b. How drunk did you meet John?

c. How young did John buy the mare?

d. How did John drink his coffee yesterday?

He proposes that extraction of all OODs is grammatical, but many are unacceptable due to intervening semantic or pragmatic factors. The issue of extraction out of secondary predicate adjuncts is beyond the scope of this thesis, though it does appear to be related to lexical aspect (Truswell, 2007).

[16] Some theorists (e.g. M. Koizumi, 1994) claim SODs can be generated both inside and outside of the VP.

d. John read no newspaper$_i$ [hot off any press]$_i$

(Example from Ike-Uchi, 1990)

This then raises the question; if the SOD is outside the VP, then what projection is it attached to? Theorists have differed on this, and have given a wide variety of suggestions, ranging from AgrS (Dechaine, 1993; Gueron & Hoekstra, 1995), IP (Rothstein, 1983; Nakajima, 1990), to PrP/VoiceP (Bowers, 2001; Pylkkanen, 2008).

Nakajima (1990) argues for SODs being external to the VP and adjoined to IP. He bases this on the results of extraposition from NP and heavy NP shift tests. He notes that OODs can appear to the left of extrapositions from the subject or the object, but SODs can only appear to the left of extraposition from the subject, and not to the left of extraposition from the object:[17]

(48) a. [Many Americans t] eat fish$_i$ raw$_i$ [who are interested in something Japanese]

b. John ate [the fish$_i$ t] raw$_i$ [which he bought at Legal Seafoods]

(49) a. [A man$_i$ t] left happy$_i$ [who had a plan to build a new house in the suburbs]

b. *Bill$_i$ left [the party t] angry$_i$ [which my wife had prepared since last weekend]

On his assumption that extrapositions from the subject are adjoined to the IP and that extrapositions from the object are adjoined to the VP, Nakajima concludes that SODs are associated with the IP, and so cannot appear to the left of extraposition from the object. However, Winkler (1997, p. 63) points out that this argument is considerably weakened by evidence from Culicover and Rochemont (1990) and Rochemont and Culicover (1990) that shows that extraposition from the subject must be able to attach to the VP. If this is the case, then this argument merely shows that there are height differences between the SOD and OOD, but not that the SOD is outside the VP.

On a similar line of argument, Nakajima also notes that under heavy NP shift tests, the heavy NP can't be moved to the right of the SOD, but it can be moved to the right of the OOD:

(50) a. John ate t raw [the fish which he bought at Legal Seafoods last week]

b. *John left t angry [the awful party where everyone was drunk and rowdy][18]

This depends on the assumption that the landing site of the heavy NP is the VP. However, as Winkler (1997, p. 63) points out again, not only is this assumption questionable,[19] but it shows

[17] The following examples are from Nakajima (1990)

[18] However, this is found acceptable by some speakers, and improves if an indefinite determiner is used. E.g.

(i) John left t angry [an awful party where everyone was drunk and rowdy]

[19] This is on the grounds that there is a ban on rightwards movement (Kayne, 1994), and that Heavy NP Shift is better analysed as light verb raising (Larson, 1988a). However, this ban has been increasingly questioned in recent years, and in fact Heavy NP Shift appears to be a case of rightwards movement.

only that heavy NPs are adjoined lower than SODs, which argues for a height difference between SODs and OODs, but not necessarily for an SOD external to the VP approach.

To help determine the position of the SOD, it is useful to look at similar types of adjuncts, and what positions they have. Adverbials of a similar or same kind tend not to co-occur (Jackendoff, 1972; Cinque, 1999), and we can see that manner adverbs can co-occur with SODs, but not OODs (Hornstein & Lightfoot, 1987):

(51) a. John ate the meat greedily naked

b. *John ate the meat greedily raw

Tellingly, manner adverb and SODs cannot be reversed, with manner adverbs always preceding SODs:

(52) a. (i) John ate the meat quickly naked
(ii) *John ate the meat naked quickly

b. (i) John hit the dog sharply angry
(ii) *John hit the dog angry sharply

This is a useful diagnostic for the relative height of these two constructions, and this suggests that OODs are similar in their layer to manner adverbs, while SODs aren't in the same class or of the same type of manner adverbs. Rather, SODs are closer to the height of temporal or locative adverbials. SODs can precede or follow temporal and locative adverbials, while OODs prefer to precede them.

(53) a. John rode the tram in Melbourne drunk

b. John rode the tram last night drunk

(54) a. (i) John ate the meat raw in the restaurant
(ii) ?/??John ate the meat in the restaurant raw[20]

b. (i) John drank the beer cold last night
(ii) ?/??John drank the beer last night cold

As we have already seen, manner adverbs do not differ significantly in the meanings they can have depending on their position. This is different from depictives, and we can see this in that SODs can serve as restrictors, while manner adverbs resist restrictor status when used with habitual sentences (Müller-Bardey, 2005). Take, for example, a locative adverbial versus a manner adverb.

(55) a. On the roof, John drinks

b. John drinks on the roof

[20] There is some interference in these judgements because the locative or temporal adverbial may be parsed as an entire NP, e.g. *the meat in the restaurant*.

(56) a. Carefully, John climbs the wall

b. John climbs the wall carefully

While (55) shows a difference in interpretation depending on whether the adverbial is fronted or not, (56) does not. The different interpretation available for the locative adverbial is that of a restrictor; (55a) can be interpreted as that when on the roof, what John does is drink, whereas (55b) only holds that if John drinks, it is (at least sometimes) on the roof. (56) doesn't show this ambiguity. Compare this to a depictive:

(57) a. Drunk, John drives very dangerously

b. John drives very dangerously drunk

Instead of merely adding further information about the manner of the habitual action, the general reading of these sentences is that of the restrictor interpretation. *When* John is drunk, he drives very dangerously.[21] Here, it is useful to talk more about what the restrictor does. On a tripartite model of restricted quantification, we can distinguish between the quantifier (Q), the things that are mapped to the restrictor (R), and the things that are mapped to the nuclear scope (N) (von Fintel, 1994).

(58) [Qx:R(x)] N(x)

A restrictor (or restrictive clause) restricts the quantifier to only quantify over individuals that meet its property. The nuclear scope indicates a property or relationship that the individuals have. Consider a domain of discourse about a university in which there are only students or professors, we can then say:

(59) a. Some left

b. $\exists x$ LEAVE(x)

There is no restriction on who *left* refers to, so this statement is true in any case that at least one person left, i.e. this statement is true if only some students left, only some professors, or a mixture. If we add a restrictor, we can see how this changes the truth-conditions of the sentence:[22]

(60) a. Some students left

b. [$\exists$x: STUDENT(x)] LEAVE(x)

Given the restrictor *students*, this statement is true if and only if there was at least one student that left. A restrictor, then, puts restrictions on what members of the domain of discourse can satisify the predicate. On the Mapping Hypothesis (Diesing, 1992), the syntactic position determines whether material is mapped to the nuclear clause or the restrictor.

---

[21] I do not find (57a) particularly ambiguous, however, Müller-Bardey (2005, p. 107) states that depictives are less likely to function as a condition for habituality in the postverbal position.

[22] The use of plural marking most likely entails more than one, but I've purposefully simplified this for the sake of the example.

(61) *Mapping Hypothesis*: Material inside the VP is mapped to the nuclear scope. Material in the IP is mapped to a restrictive clause.

We can use this to explain the ambiguity of (55), and the nonambiguity of (56) and (57). Locative adverbials can appear inside or outside of the VP, whereas manner adverbs only appear inside the VP; we can see that two locative adverbials can easily co-occur, as compared to manner adverbs which we already know resist co-occurence.

(62) a. John lives in Melbourne in a CBD apartment

b. ??John washes the car happily carefully

(63) a. In Melbourne, John lives in a CBD apartment[23]

b. ??Carefully, John washes the car happily

On the Mapping Hypothesis, when fronted, locative adverbials are mapped to the restrictor, as they are outside the VP. When locative adverbs follow the matrix clause, they are mapped to the nuclear scope, since they are inside the VP. Manner adverbs cannot be mapped to the restrictor since they are always located inside the VP, and hence there is no difference in meaning. We know that SODs are higher than manner adverbs, and are similar in height to locative adverbials. Further, they are most likely higher since SODs prefer the restrictor interpretation. Thus, we conclude that SODs are outside the VP, as they are outside nuclear scope.

Traditionally, temporal and locative adverbs are taken to be within the VP (Jackendoff, 1977; Andrews, 1982), but the restrictor data suggests that they and the SOD are generated outside the VP, and are adjoined higher up. These seemingly contradictory points of data are reconcilable on an extended VP approach. The SOD is thus within the extended VP, but outside the bare VP.[24] With the view of the extended VP, we can then revise Diesing's Mapping Hypothesis:

(64) *Mapping Hypothesis* (Larson's revision): Lowest material from VP is mapped to the nuclear scope. The residue is mapped to a restrictive clause.

(Definition from Larson, 2004, p. 32)

I argue that the SOD attaches to the VoiceP projection. I do this for three main reasons. First, I adopt the hypothesis that VoiceP is the site of introducing the external argument, which is separated from the verb. As such, this is the point at which the subject is introduced, and so is naturally the point where an SOD should be in order to be predicated of the subject. The second is that a VoiceP analysis can be used to reduce both primary and secondary predication down to a single predication relationship (Bowers, 2001). The third is because of data from PRO, VoiceP, and nominalisations that shows the requirement of a VoiceP for a SOD to be acceptable, which I now discuss.

[23] We can see that this can be paraphrased as "When in Melbourne, John lives in a CBD apartment."

[24] Winkler (1997) and Ike-Uchi (1990) adopt a similar view based on Larsonian VP shells (Larson, 1988a, 1988b).

As noted previously, implicit objects and implicit agents of passives cannot serve as hosts for secondary predicates. Given the acceptability of the below sentences, secondary predicates are used standardly as an argument for a syntactically represented PRO (Landau, 2013):

(65) a. The meat was too chewy [PRO to be eaten raw]

b. [PRO to serve dinner angry at the guests] is bad manners

Safir (1987) notes that depictives are acceptable when predicated of the subject of a nominalisation.

(66) [PRO discussion of these issues stoned] rarely produces satisfactory results

Nominalisations can be separated into two types. Argument Structure nominals (AS-nominals) and Referential nominals (R-nominals) (Borer, 2013).[25] AS-nominals and R-nominals differ in whether they contain VoiceP. Since R-nominals lack VoiceP, they cannot serve as a host for SODs, while AS-nominals can, since they have VoiceP:

(67) a. [PRO discussing these issues drunk] is a bad idea

b. [PRO the discussion of these issues drunk] is a bad idea [AS-nominal]

c. *[PRO the discussion drunk] is a bad idea [R-nominal]

This can be further seen in the way that depictives disambiguate between AS-nominals and R-nominals:

(68) Maria's reading of Pride and Prejudice received better reviews than Anna's (Kratzer, 1996)

The sentence in (68) is ambiguous between an AS-nominal and a R-nominal, and so has two readings—one in which Maria and Anna are agents, and another in which they are not. On the AS-nominal reading, Maria and Anna are those who gave readings of Pride and Prejudice. On the R-nominal reading, Maria and Anna attended different, separate readings of Pride and Prejudice, and aren't the ones who gave the reading. Since depictives are only acceptable with AS-nominals, when added to a nominalization that is ambiguous between an AS-nominal and a R-nominal, it disambiguates the sentence by forcing an AS-nominal interpretation:

(69) Maria's reading of Pride and Prejudice drunk received better reviews than Anna's sober

In (69), Maria and Anna must be agents, and a reading where they attended separate readings that they did not give is unavailable. If SODs were generated inside the VP, then these facts would be mysterious and unexplained, since there is apparently no difference in the VP between these sentences. A possible counter-view of this is that SODs purely need an Agent theta role. However, unaccusatives, which lack an Agent role, are acceptable,[26] whereas by-phrases, which introduce an

[25] Grimshaw (1990) gives a three-way split, but I follow Borer in distinguishing only between those that support argument structure and those that do not.

[26] Tests indicate that these are SODs, and not OODs:

agent, are not acceptable hosts:[27]

(70) The ship$_i$ sank empty$_i$

(71) *The ship was sunk by the captain$_i$ drunk$_i$

As such, I conclude that SODs are VoiceP adjuncts, and so are generated outside the bare VP, but within the extended VP.

2.3.1 A small clause analysis of secondary predication

I now discuss the internal structure of the depictive itself. There are two main approaches to depictives. A small clause/control analysis, and a complex predicate analysis.[28] Small clause analyses[29] have the depictive as a small clause predicate, with a PRO subject which is controlled by a DP in the main clause. The depictive then establishes an indirect link with the controller of its subject PRO. The level at which the secondary predicate is joined determines what its syntactic controller can be, and therefore its interpretation.

Complex predicate approaches instead have the depictive combine directly with the verb, forming a complex predicate. As such, contrary to the small clause approach, a predication relationship is directly established between the depictive and its subject, instead of an intermediate one through control, as the verb and depictive become a complex predicate and so form a predicative relationship together with the subject.

I choose a small clause approach over a complex predicate analysis for a number of reasons. The small clause has the benefit of uniting main clause predication and secondary predication, as the VoiceP introduces the external argument as well as the secondary predicate. Further, as we will see in later chapters, the semantics and function of this operation, and the head of the VoiceP projection, are crucial to my analysis of secondary predication.

There are also independent issues with complex predicate analyses. For example, on complex predicate analyses, OODs and resultatives are syntactically non-distinct (e.g. Cormack and Smith, 1999; Rothstein, 2003, 2004). But tests reveal that OODs and resultatives differ in what they accept:

(i) a. The ship$_i$ sank empty$_i$ and the boat$_j$ did so full$_j$

b. *What sank was the ship empty

c. (i) The ship sank off the coast empty
(ii) The ship sank empty off the coast

[27] However, this is marginally acceptable if a heavy pause is inserted between *drunk* and the rest of the sentence, but in this case it is not a depictive.

[28] Complex predicate analyses can be further separated into two types– lexical approaches (Wunderlich, 1997) or syntactic operations (Bach, 1980; Rothstein, 2001, 2004). See also Cormack and Smith (1999), Geuder (2000), Irimia (2012).

[29] Among others: Williams (1980), Chomsky (1981), Rothstein (1983), Hoekstra (1988), Roberts (1988), Dechaine (1993), Bowers (2001)

(72) a. John met Mary$_i$ [whistling La Internationale]$_i$

b. *John cooked the meat disgusting

While OODs can be verbal participles with *-ing*,[30] resultatives cannot be.

This would be difficult to explain if OODs and resultatives are syntactically non-distinct. Second, as we will see in the next section, the depictive predicate can have different properties from the main event, such as in how long the depictive holds of the entity it is predicated of. Again, this is difficult to explain if the depictive predicate and main predicate form a complex predicate. Following Bowers (2001), I argue that SODs are adjoined at VoiceP, and OODs are adjoined within the VP.[31].

2.4 Semantic properties of depictives

There is a lot of controversy over the semantic properties of depictives, with many proposed properties being contested in the literature. In this section, I look at a few of the major semantic properties of depictives, and discuss the evidence for them. As we will see, there are certainly a cluster of key properties of depictives, but they don't always appear to be necessary, and are often a matter of (strong) preference rather than a restriction.

Depictives generally hold of a participant at a given time, and the depictive must share a thematic role with the matrix verb (Williams, 1980; Rothstein, 1983). For example:

(73) *John drove Mary$_i$ drunk$_i$

Specifically, this can't merely mean John drove while Mary was drunk; there needs to be a relationship between John's driving and Mary's drunkenness. For example, the reading where John drives Mary in a car, and Mary is drunk is fine.

2.4.1 Depictives as temporary properties

Though many properties are disputed, "it is generally agreed that in English, depictive predicates must denote non-inherent and transistory properties." (Rothstein, 2011, p. 1444). This is based on the observation that depictives that have more permanent properties are judged unacceptable compared to those with temporary properties. Rothstein (1983) gives the following contrasts in acceptability to motivate this view:[32]

[30] Though, as noted previously, Rothstein (2004) denies that there are VP depictives due to the way that she treats event summing.

[31] Bowers specifies V′ for OODs, but the exact position of the OOD will depend on what analysis of the VP is adopted. See chapter 5 for a brief discussion of this that involves an extended VP analysis.

[32] I use the star here as this is what Rothstein reports, however, these sentences are not always unacceptable to speakers, and are often improved if given proper context. For example, if told in the context of the historical change of the colour of carrots from purple to orange, then *We eat carrots orange* can make sense. The important point in this case is that the context then shifts the property to be a less permanent one, or provides an appropriate contextual boundary or bound for the property. In my judgement, I would mark these ?? if uttered 'out of the blue'.

(74) a. John ate the peanuts$_i$ salted$_i$/*salty$_i$

b. John ate the meat$_i$ raw$_i$/burnt$_i$/*tasty$_i$

c. I met Mary$_i$ drunk$_i$/in high spirits$_i$/*tall$_i$/*stupid$_i$

d. We eat carrots raw$_i$/*orange

Salted and *salty* are more or less the same in the property they ascribe to the peanuts, but *salty* is usually interpreted as being a permanent, inherent property, as compared to *salted*. This contrast can be seen in other examples in which a temporary property serves fine as a depictive, but a more permanent one is unacceptable.

(75) a. John drove home drunk

b. #John drove home intelligent

This particular observation has been phrased in many differents ways by researchers: Bolinger (1971) mentions needing a temporary state; Dowty (1972) phrases it as depictives being a 'temporally restricted state'; Randall (1982) says that it has to be 'escapable from'; Ogawa (2001) states that it must be a 'relational predicate'; and Wyngaerd (2001) argues for 'boundedness'. All of these revolve around the insight that the property denoted by a depictive has a temporary interpretation, or otherwise picks out a particular point in time.

The most common way of framing this restriction is by using the distinction between Stage-Level and Individual-Level Predicates (Carlson, 1977). The SLP/ILP divide stems from work by Milsark (1974) – who used the terms *state-descriptive* and *property* predicates – and Carlson (1977), who introduced the Stage-Level/Individual-Level terminology. The distinction is based on the observation that predicates can differ in what they express – such as being properties of stages, or properties of individuals:[33]

> "A stage is conceived of as being, roughly, a spatially and temporally bounded manifestation of something [...] An individual, then, is (at least) that whatever-it-is that ties a series of stages together to make them stages of the same thing."
>
> (Carlson, 1977, p. 68)

Many researchers have claimed that only SLPs are suitable for use in depictives.[34] However, there are examples of what appear to be ILPs serving as depictives:

(76) a. Poe died a pauper

b. They left the Army feverent noninterventionists

[33] Carlson (1977) also divides individuals up further into objects and kinds, but this will not be relevant for the discussion here.

[34] This is a widely repeated and oft-cited claim. As a small sample: Rothstein, 1983; Stump, 1985; McNulty, 1988; Tsuzuki, 1988; Jackendoff, 1990; Rapoport, 1991, 1993a; Miyamoto, 1994; Maruta, 1995; N. Koizumi, 1996; Winkler, 1997; Himmelmann and Schultze-Berndt, 2005; Simpson, 2005; Maienborn, 2011.

c. My dad was born compulsive and will die compulsive

d. The tablecloth went to the cleaners white and came back yellowish

(Examples from McNally, 1994)

A natural rejoinder to examples like (76) is that the ILPs are coerced into SLPs by being in a depictive context.[35] This predicts that when ILPs are put into depictive constructions, they are either judged unacceptable, or receive a 'temporary' interpretation—such as giving a sense that the property is temporary, or is an implicit comparison to another state of affairs. But several authors have argued against this (Condoravdi, 1992; McNally, 1994; Filip, 2001).

McNally (1994)[36] argues against a coercion account based on two points. First, the properties expressed by the depictives in (76) are not required to be transistory properties in order to be true. Second, depictives with ILPs "yield a conversational implicature that the event expressed by the main predicate marks a contextually significant boundary just after the believed beginning or just before the believed end of the interval during which the adjunct predication holds" (McNally, 1994, p. 5). She points out that depictives with SLPs don't trigger this implicature, but ILPs do have – in terms of Condoravdi (1992) – an 'inference of temporal persistence':[37]

> Individual-level predicates are associated with an inference of temporal persistence, stage-level predicates are not. The inference of temporal persistence in effect specifies the following: if an eventuality is going on at time t and you have no information that it is not going on at some later time t', then infer that it is going on at that later time t' as well. Note that this is a default inference, surfacing only if there is no information to the contrary
>
> (Condoravdi, 1992, p. 9)

Previous researchers have suggested there must be a pragmatic compatability (e.g. McNally, 1994; Aarts, 1995) or that there is a particular semantic link between the verb and the depictive that must be met (e.g. Demonte, 1987). For example, McNally notes that there is a *simultaneity condition*, so that the property denoted by the secondary predicate has to hold at the same time as the event denoted by the main verb. According to her account, if the condition is trivially met (e.g. such as in an ILP which is generally thought to hold of the subject at all times), then the sentence is unacceptable.[38] This has the benefit of explaining why appropriate context can improve the acceptability of depictive constructions—when a proper situation is established in which the condition is met non-trivially, then the sentence can be interpreted.

In terms of McNally's analysis, a context that allows the simultaneity condition to be non-trivially

[35] Another issue is that the SLP/ILP distinction has been increasingly challenged in recent years, with some researchers arguing that it is an aggregrate of several differences (e.g. Higginbotham and Ramchand, 1997; Fernald, 2000; Jäger, 1999, 2001), or that it is better explained by reference to another distinction (e.g. Wyngaerd, 2001; Husband, 2012). I return to discuss the SLP/ILP distinction in more depth in chapter 4.

[36] McNally uses *circumstantial* to refer to SODs, and *depictives* to refer to OODs. I do not follow this terminology.

[37] But, as Carlson (1977, p. 72) notes, *be dead* is a SLP, so sense of permanence is a weak notion for ILPs.

[38] Rothstein (1983) has a similar account in that the depictive must simultaneously be an intrinsic and transitory property of its subject.

met improves the acceptability of the sentence. This can be extended to explain why there is a tendency to interpret depictives as being temporary states. This analysis also predicts that this infelicity could be exploited for conversational effect. Consider McNally's example of:

(77) Joe went in to the exam unprepared, he went in to the exam tired, he went in to the exam without a calculator. *But he didn't go into the exam stupid.* And so it turned out that he got the highest grade in the class, despite himself.

(Example from McNally, 1994, p. 11)

As McNally notes, there is no implication that John has changed from being stupid, or that he will soon become stupid. If ILPs were being coerced into SLPs, then we would not expect the inference to continue. This presents an issue which coercion accounts must explain. But although the theoretical components are under heavy debate, the observation that depictives prefer to be interpreted as temporary predicates is a robust one, and a theory of depictives needs to be able to capture this.

2.4.2 Depictives and cotemporality

Another key property is that there is a strong link between the temporal components of the matrix verb and the secondary predicate, with the event of the matrix verb and the property of the secondary predicate temporally overlapping. As noted previously, depictives are participant-oriented, rather than event-oriented—they attribute a quality to the subject of the depictive at the time of the event denoted by the verb of the main clause it is attached to. Importantly, depictives appear to introduce their own eventuality, which composes with the main event. It is clear that, minimally, the property of the depictive holds of the subject during the same time as the matrix event (and it may be pragmatically interpreted to extend beyond this given appropriate context). On event summing approaches like Rothstein (2004), the runtime of the depictive property is set by the runtime of the matrix event.

(78) a. He drove the car drunk

b. He drove the car to the store drunk

In (78a), the property *drunk* holds of the subject during the event of his driving. When the runtime of the matrix event is changed (78b), this changes how long the property holds of the subject. This interpretation is robust, with a general inability to state that the subject wasn't drunk for the entire event:

(79) He drove the car drunk... #but he was sober by the end

However, some speakers do appear to accept sentences where the property is cancelled before the entirety of the event runtime:[39]

[39] Arguably this is due to an ambiguity in the main verb. as to whether e.g. *took the tram home* is referring to the action of undertaking the event, or the entire event itself. Compare:

(80) He took the tram home drunk... but got off half-way and sobered up before arriving home

(81) a. He drove the car to the store drunk... %but he sobered up on the way there

b. He took the tram home drunk... %but he sobered up before he got home

This suggests that the view that the depictive's runtime is set by the matrix event's runtime is not wholly correct. Further evidence for this comes from the fact that we can see that how long the property holds for can actually vary:

(82) a. John$_i$ painted the house tired$_i$

b. John$_i$ reached the summit exhausted$_i$

c. They dissected the animal$_i$ alive$_i$

In (82a), the depictive *tired* holds of the participant (John) for the entirety of the event. Compare this to (82b), for which the only requirement is that the participant be tired by the beginning of the achievement, i.e. the point at which the summit is reached. A final example is (82c), in which it cannot be the case that the secondary predicate holds for the entirety of the main event, as they clash—dissection entails death, and so an animal cannot be alive during the full process of dissection. Double object constructions similarly show a variance in how long the depictive holds of the matrix event:[40]

(83) a. I threw/sent him the ball wet, but when he got it it was dry

b. When it left my hand/me it was wet, #but I threw/sent him the ball dry

For complex predicates which have a cause and a result event, the depictive only modifies the former:

(84) a. He flattened the metal wet, but by the time it was completely flat it had dried

b. He always shears the sheep asleep, although they usually wake up before they are completely shorn

c. People usually cook lobsters alive (by the time they achieve cooked state, they are dead)

As such, more properly stated, the property of the depictive only holds of the causing event, though it can be extended further to cover the entirety of the event depending on type and use.

2.4.3 Aspectual restrictions on OODs

Depictives differ in some restrictions depending on their orientation, with OODs being more restricted than SODs. OODs appear to have more stringent restrictions on the aspectual types of events that they can compose with.

[40] The following examples are from Bruening (2015).

(85) Accomplishments

a. We ate the meat$_i$ raw$_i$/cooked$_i$

b. John served the soup$_i$ cold$_i$/hot$_i$

c. Mary climbed the wall$_i$ wet$_i$/dry$_i$

(86) Achievements

a. ??John reached the summit$_i$ icy$_i$

b. ??John recognised Mary$_i$ drunk$_i$

c. ??John won the box$_i$ broken$_i$

(87) Activities

a. ??John pushed Mary$_i$ drunk$_i$

b. ??John chased Mary$_i$ drunk$_i$

c. ??Mary juggled the balls$_i$ dry$_i$

(88) Semelfactives

a. ??John knocked Mary$_i$ drunk$_i$

b. ??John blinked his eyes$_i$ bloodshot$_i$

c. ??The emu flapped its wings$_i$ injured$_i$

Based on data like this, it has been claimed that depictives can only be depicted of objects inside telic and durative VPs (Richardson, 2007; Motut, 2010; Irimia, 2012), i.e. accomplishments. There have been a number of different explanations for this apparent ban. For example, Rapoport (1993b, 1999) uses the Aspectual Structure framework of Erteschik-Shir and Rapoport (1997) to give an account of depictives. She argues that the "host of a depictive predicate must be a subject in AS structure." (Rapoport, 1999, p. 662). This goes towards explaining the apparent difference in restriction between SODs and OODs, as in this framework, only accomplishment objects are underlyingly subjects, whereas activity and achievement objects are not. This predicts that all objects of activity and achievement verbs cannot serve as depictive hosts.[41] However, depictives predicated of objects of activities and achievements are attested. Likewise, OODs with semelfactives are also found:

[41] Some authors (e.g. Richardson, 2007) suggest *push* might be a semelfactive and so is ruled out on those grounds. I return to this below.

(89) a. I recognised$_{[ACH]}$ him$_i$ dead$_i$ better than I had recognised him$_i$ alive$_i$

(Google)

b. Between lessons (once a week) the guitar lost its tune and my sister played$_{[ACT]}$ the guitar$_i$ untuned$_i$ because she didn't know how to tune it.

(Google)

c. She made no sounds as her feet hit$_{[SEM]}$ the ground$_i$ [wet from dew and rain]$_i$

(Google)

If only objects of durative, telic VPs were able to serve as hosts for depictives, then we would expect the examples in (89) to be unacceptable. However, since this is not the case, this raises the question of where the difference in acceptability arises from—why are some sentences involving nondurative or atelic VPs unacceptable while others aren't? Obviously there cannot be a wholesale ban on OODs with regards to verb class, and so the restriction must be finer-grained.

Taking OODs with activity verbs as being representative of this issue, explanations for this difference in acceptability have varied, with many revolving around the thematic role involved in the depictive. But these often have counter-examples, and so fail to capture the data. For example, it is argued that the depictive cannot be predicated of a non-affected-theme object (Williams, 1980; Rothstein, 1983; M. Koizumi, 1994). This is used to explain the unacceptablity of sentences like:

(90) a. *John hit Tom$_i$ naked$_i$

b. *Mary praised the professor$_i$ drunk$_i$

(Example from M. Koizumi, 1994, p. 64)

But Richardson (2007) provides counter-examples, and argues that such depictives are acceptable if there's no 'semantic mismatch' between the primary and secondary predicate:

(91) The photographer praised the model$_i$ naked$_i$ (Richardson, 2007, p. 122)

Similar approaches have stated that only a certain subset of thematic roles can be predicated of. Williams (1980) argues that OODs can only be predicated of themes. However, McNulty (1988) provides the following counter-examples:

(92) a. I marinated the meat$_i$ raw$_i$

b. I sanded the floor$_i$ wet$_i$

c. Mary destroyed the novel$_i$ unfinished$_i$

(Example from McNulty, 1988, p. 208)

McNulty argues that these are depictives predicated of patients, which contradicts Williams' restriction. McNulty (1988, p. 211) puts forth her own generalisation that depictives can only be predicated of themes, agents, and patients, with patients only being acceptable if there are no themes in the structure. This, however, also appears to be inadequate:

(93) a. *John patted the meat$_i$ raw$_i$

b. John marinated the meat$_i$ raw$_i$

Under McNulty's analysis – assuming *the meat* is a patient in both – (93b) would have to contain a theme while (93a) doesn't, but there does not seem to be a good reason to expect that this is true. On a similar track, Rothstein (1983) suggests that depictives cannot be predicated of goals, however, Jackendoff (1990, p. 203) demonstrates that this does not capture the empirical data either.

(94) a. John$_i$ received the letter drunk$_i$

b. Bill buttered the bread$_i$ warm$_i$

I argue that the issue here is the basing of the restriction in terms of the thematic role that the depictive is predicated of, which cannot be maintained. Instead, there is a more complex interaction involving the parts of the event and their interaction across the nominal and adjectival domain. In a similar vein, Motut (2014) has argued that what is relevant is whether the secondary predicate can be mapped to every subpart of the situation.

> There is a (sub)part of the object (or possibly the entire object) being Q-ed (where Q is the primary predicate), in every sub-event/situation of the larger event/situation denoted by the primary predicate.
>
> (Motut, 2014, p. 245)

I believe that this sort of analysis is on the right track, however, it is not exactly clear how Motut's account would explain the difference between the adjectives *loaded* and *broken*, which both appear to be a mappable property to every subpart of the situation:[42]

(95) a. ??John pushed the cart$_i$ broken$_i$

b. John pushed the cart$_i$ loaded$_i$

I take this minimal pair to demonstrate that what is relevant is not just the type of object and the verb class, but also the type of adjective that is used and its relationship to the matrix event. The differences in acceptability with different verb classes shows that there are aspectual interactions between the depictive, its controller, and the matrix event.

2.5 Aim of analysis

For a satisfactory account of depictives it is necessary to integrate an account of their properties with an explanation of their restrictions. The goal of my analysis is to successfully capture and explain this variability with depictives, especially with regards to OODs. As seen in this chapter,

[42] Likewise, Motut (2014, p. 246) notes that her account rules out OOD goals, but this conflicts with the data presented by Jackendoff (1990) as discussed above.

there are a number of interesting properties of depictives. For this thesis, I consider two questions in particular that have been raised in the literature.[43]

1. What determines the restriction on verb classes for OODs?
2. Why are depictives interpreted as being temporary states?

In order to ground a suitable theory of depictives, we need to be able to answer these questions. As we've seen in this chapter, there many incorrect generalisations about the depictive construction that still proliferate the literature, leading to an unsatisifactory analysis of depictives. In the next chapter, I focus on the first question: the restriction on verbs classes for OODs. By concentrating on adjectival OODs, I will show how differences in formal features of adjectives can affect the acceptability of OODs with activity verbs, and what this can ultimately tell us about the depictive construction.

[43] Another important question, though not one explored in this thesis, is whether depictives and resultatives are instantiations of the same predicative relationship. For example, Williams (1980), Rothstein (1983), Simpson (1983), Bowers (1993) hold that depictives and resultatives both stem from the same secondary predication operation, while Dowty (1979) argues that resultatives are complex verb formations, and depictives are adjunct predicates.

Chapter 3

Depictives and adjective scales

In this chapter, I focus on adjectival OODs and their restrictions. As we saw in the last chapter, OODs show restrictions based on the verb class they're composing with—while OODs predicated of objects of accomplishment verbs are generally fine, OODs predicated of objects of activity verbs are much rarer. I will look at various accounts that have been offered to capture this descriptively, and evaluate their success. Any theory of depictives that bans OODs with activity verbs is obviously insufficient, but it has proven difficult to correctly characterise which OODs are acceptable without over- or under-generating. There have been a wide array of suggested explanations for this restriction by verb class, but I will show that most have been unsuccessful. The aim of this chapter is to look at what can capture the difference between a pair of sentences like (95):

(1) a. John pushed the cart$_i$ loaded$_i$

b. ??John pushed the cart$_i$ broken$_i$

This pair suggests that a property of the adjective interacts with the depictive to condition acceptability. Given the apparent interaction of adjective properties with the depictive construction, it is useful to look at what distinctions can be made within the class of adjectives, and how these might capture this variance. A particularly important property of adjectives is their *gradability*, which is dependent on *adjective scales*. By using the variable acceptability of gradable adjectives as OODs, I will propose my own analysis of the verb class restriction based on adjective scales. I will show has greater empirical coverage as well as successfully predicting previously unnoticed behaviour.

Defining the semantic category of adjectives is difficult, but perhaps most simply they can be thought of as modifiers that denote properties or qualities that an object has. An interesting factor is that some objects can differ in how much of a property they have, while other objects either have the property or not. We can see this difference by asking how much an object has of a property.

(2) a. How tall is this house?

b. ??How prime is this number?

While (2a) is a perfectly reasonable question, (2b) is nonsensical. It doesn't make sense to ask how prime a number is, since numbers cannot differ in their (amount of) 'primeness'. However, it is also odd to suggest that a given object has 'tallness'. More correctly, we would say that a given object is tall if the object has a height that meets or exceeds the standard that we're designating

as being tall. This reveals two key facts about adjectives: they can vary in how much of a property they denote an object has, and that there are standards by which we judge whether an object has that property or not. Adjectives that can vary in their amount are called *gradable*, while adjectives that are categorical (i.e. they either have the property or not) are called *non-gradable*.[1] Whether an adjective is gradable or not affects which context it can appear in:

(3) a. i) A very tall woman
ii) #A very prime number

b. (i) The taller woman
(ii) #The primer number

c. The boy is six feet tall

Gradable adjectives can take a degree modifier like *very*, can be used in comparative constructions, and can appear with a measure phrase. Conversely, non-gradable adjectives cannot. This follows as a consequence of being non-gradable, as that means the property is categorical, and so it doesn't make sense to say something is e.g. *very prime* if something cannot differ in how much something has that property. Similarly, it's not possible to compare two items in how much they have of a property if there's no ability for that property to differ in its amount.

The sentence in (3bi) obviously requires a comparison to another woman with regards to height, and so can only be uttered in a context which supplies that. So we might say that context provides the suitable objects for comparison. But what about *a very tall woman* in (3ai)? It seemingly does not require any other woman to be in the domain of discourse—we could imagine a scenario in which there is only one person left, and the sentence would still be seen as felicitous. And yet it still seems to be compared to something, since even though there may only be one person left, the judgement of their tallness depends on what we know about height, and what counts as tall for women. In this case, we say that there is a comparison to a *standard*.

Standards can be conceptualised in a few different ways, but essentially they are what is compared to in order to determine whether something meets having that property or not. To determine whether something is tall requires comparing the relative property to what is the standard decided for tallness. These standards can differ, and so gradable adjectives can be further divided into *absolute* and *relative*.[2] Relative adjectives have context-dependent interpretations, and what counts as fitting that property will depend on the situation and the relevant facts under discussion. Conversely, absolute adjectives are relatively context-independent, and their standards are set independently.

To see this, consider again the adjective *tall*, which is a relative adjective. The standards for what is considered *tall* don't always appear to be the same. For example, while we might say that Mary

[1] Gradable adjectives can further be subdivided into *dimensional* and *evaluative*, following Bierwisch, 1989. This is related to the property of scales (discussed below), but is likely a separate factor as well (see Morzycki, 2015, 133ff for discussion). Also relevant to the class of gradable adjectives are adjectival participles or deverbal adjectives, depending on the verb class that they are derived from (Demonte, 2011, p. 1316).

[2] The terms appear to originate with Unger (1971, 1975). The exposition I present here is based on the accounts developed in Kennedy and McNally (2005) and Kennedy (2007).

is a tall jockey, this doesn't necessarily license the fact that Mary is tall, only that she is tall *relative to other jockeys*. As proof of this, imagine a situation in which we can change the class of jockeys. If jockeys have a height that is relatively close to, or exceed Mary's height, then the statement that Mary is a tall jockey would be judged false. Conversely, if we consider the scenario in which (other) jockeys only have a height that is substantively less than Mary, the statement is judged true. Further, we could imagine a case where Mary is also independently tall by general standards, in which case *tall jockey* could be interpreted as being tall *and* a jockey, rather than being tall *for* a jockey.

Compare this to *full*, which is an absolute adjective. To be full is not something that can easily contextually vary, since there is a clear notion of what something needs to be in order to be classified as full, i.e. having no room left for the object in question. Two objects that are considered full are going to be full in a manner that is more context-independent than what is considered tall. This difference in context-dependence can also be seen with the distribution of *for*-PPs. *For*-PPs specify further information about a context, and are acceptable with relative adjectives, but less so with absolute adjectives.[3]

(4) a. (i) Mary is tall/short for a jockey
(ii) That desk is wide for a study desk

b. (i) ??Mary is awake for a jockey
(ii) ??That desk is wet for a study desk

This follows from the context-dependence of relative adjectives; since absolute adjectives are context-independent, these same *for*-PPs result in oddness.[4] We can see that this cannot result from being non-gradable, as all these examples are gradable adjectives:

(5) a. Mary is taller/more awake than John

b. This desk is wider/wetter than that desk

Aarts (1992, p. 63) states that adjectives in depictive constructions tend to be non-gradable, and demonstrates this by showing how the addition of gradable modifiers like *very*, *utterly*, or *extremely* results in unacceptability.[5]

(6) a. He painted the house (??very) unsanded$_i$

b. He met the Director$_i$ (??utterly) drunk$_i$

c. He ate the nuts$_i$ (??extremely) salted$_i$

[3] These examples sentences can be made interpretable, but only if supplied with a specific context, which in effect gives a context-dependent reading of the adjective.

[4] However, there are issues of context-sensitivity, and other accounts of the absolute/relative split highlight this (Cruse, 1986; Rotstein & Winter, 2004; McNally, 2009; Lassiter, 2010); even though absolute adjectives have well-defined end points, this does not mean that they're completely context-independent. I return to this point later.

[5] Aarts marks the addition of *very* with *, but I use ?? here for reasons discussed in the introduction.

However, *broken* and *loaded* in (1) are both gradable, and yet vary in acceptability. As such, this raises the question of how adjectives function with depictives. As (6) shows, the gradable status of adjectives affects acceptability. This gives a starting point for investigation, and so I will first look at gradability in adjectives generally, and then the possible divisions that can be made in adjectives structure and meaning. I will then apply these to investigating gradability in adjectival depictives specifically, and show how gradability can reveal further facts about the requirements of depictives.

3.1 Scales, degrees, and standards

Traditionally, the semantics of properties has treated individuals in a domain as either being in the set of things that have that property (the extension) or not (the anti-extension).[6] As discussed previously, items can vary in how much they have a property, and so this requires a semantics of scales, that are ordered and gradable. While a split between the extension and anti-extension is adequate if the individuals of the sets are clearly delineated, this breaks down in cases of vagueness. For the sentence *John is tall*, it is unclear whether John is in the set of tall things or not without further information about what we consider to be tall. In this way, *tall* is vague, but importantly, we can eliminate this vagueness by specifying further information; *for*-PPs can give an explicit *comparison class*, which specifies the standard to which the individual is being compared to.

(7) John is tall for a jockey

While there may be a question of whether John is tall in general, there is a more precise notion of whether John is tall for a jockey. We then need a theory that can capture vagueness, and how we can have more and less vague predicates. At its base, a gradable adjective is being compared to some measure of that property. This raises the question of what exactly is being compared, and how we should capture that in our theory of semantics. Here, it is useful to introduce the concept of *scales*. Informally, a scale is an ordering against a given dimension. So, in the case of *tall*, its scale is the ordering of things against the dimension of height. We can say that what an object is being compared to is a scale of the possible amounts of the property in question. Two objects are compared in their ordering on that scale, so that something is e.g. taller than another thing if the first object is higher on the scale, or shorter than another thing if the first object is lower on the scale.

3.1.1 Scales and endpoints

Scales can differ in whether they have endpoints or not. Take *straight* and *bent*. They are both points on a scale of straightness—we can conceptualise straightness as an ordering of possible amounts of bend, with *straight* being the point of zero bend, and *bent* being any non-zero bend, i.e. if we reduce the amount of bend in an object, there will be a point at which what we classify as straightness is reached. This will be a maximal point that caps the end of the scale, since if something is straight, it generally does not make sense to ask if it can be made straighter.[7]

[6] Also called the positive and negative extension.

[7] We can use comparatives to compare straightness, but importantly, this does not entail something is straight:

(8) This rod is straight... ??but it could be straighter

For something to be *bent*, there must be a minimal amount of bend that the object must have, which is anything below the maximal point of straightness. But there is no maximal amount of bend, and so it perfectly sensible to say something could be made more bent.

(9) This rod is bent... but it could be more bent

Straight and *bent* differ in how they relate to a scale endpoint. *Straight* is a *maximum standard* adjective, as it has a maximal point that closes the scale, while *bent* is a *minimum standard* adjective, and that same point is the minimal amount of bend that an object needs to have to be considered bent. More generally, maximum standard adjectives have a *maximal degree* or *maximal element* for what counts as having that property. This degree or element is a limiting endpoint on 'how much' of a property an entity can have, or must meet in order to have that property. Minimum standard adjectives, on the other hand, have a *minimal degree* or *minimal element* that must be met in order to count as having that property.

The examples that we have used so far, such as (*tall/short* and *straight/bent*), are all antonymous pairs of adjectives. Importantly, pairs of antonyms use the same scale, but are reversed in how they treat that scale. This has implications for standards, and depends on the structure of the scale used. We can compare the pair of relative adjectives *tall/short* to *straight* and its antonym *bent* (which are both absolute) to illustrate this point. *Tall* and *short* are antonyms, and so both use the same scale. What is tall for one context may be considered short for another, and so *tall* and *short* have no general interpretation by themselves, and must be set in a context. Contrast this with *straight* and *bent*, which have a much clearer and more general interpretation.

We can now formulate the absolute/relative distinction in terms of the difference in scale structure; any scale that has at least one closed element is absolute, while scales that lack these elements are relative. Whether a scale has a maximal or minimal element has implications for its interpretation and modifiers which it can appear with.[8]

(i) This rod is straighter than that rod $\not\Rightarrow$ The rods are straight

[8] The terms *total* and *partial* are also used for maximal and minimal endpoint adjectives respectively (Yoon, 1996; Rotstein & Winter, 2004).

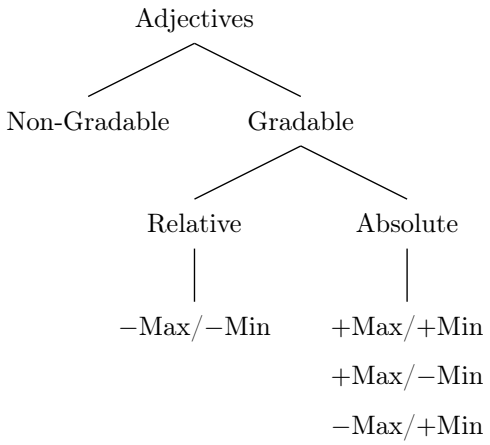


Figure 3.1: Absolute/Relative adjectives and Maximal/Minimal elements

To decide the properties of the scale that adjectives are on, we need to look at adjective polarity.

3.1.2 Adjective polarity

Antonymous pairs reveal a special fact about adjectives; adjectives have a *positive* and a *negative* form.[9] This is also called the *polarity* of the adjective. Often negative forms of the adjective are distinguished from their positive antonym with overt negative morphology, like e.g. *possible/impossible*, and *pure/impure*.[10] However, often adjective pairs don't immediately show which form is which, like e.g. *tall/short* and *wide/narrow*. To distinguish them, we can use a number of different tests; an adjective can appear in different contexts depending on whether it is the positive or negative form of an antonym pair. For example, the negative form does not appear with measure phrases, nor does it occur in nominalisations that also have the dimension that they measure.[11]

(10) a. (i) Two metres tall/??short
(ii) Two metres wide/??narrow

b. (i) 50 years old
(ii) ??50 years young

(11) a. The length/width of the box is one metre

b. #The shortness/narrowness of the box is one metre

Negative adjectives also resist being used in comparatives with *twice as*.

[9] Alternatively, known as unmarked and marked respectively. Unfortunately both sets of terminology are also used to refer to other attributes in the literature.

[10] However, having negative morphology does not guarantee that the adjective is the negative member of the pole. For instance, *damaged* and *undamaged*.

[11] However, not all positive forms accept measure phrases. Compare *tall* to *fast*: *#100 kilometres fast/100 kilometres slow*.

(12) a. This plank is twice as long as that plank

b. #This plank is twice as short as that plank

The negative adjective also differs from the positive adjective in whether it carries a presupposition or entailment when used in *wh*-questions or equative constructions.

(13) a. (i) How tall are you? $\not\Rightarrow$ You are tall
(ii) John is as tall as Mary $\not\Rightarrow$ John and Mary are tall

b. (i) How short are you? $\Rightarrow$ You are short
(ii) John is as short as Mary $\Rightarrow$ John and Mary are short

The negative adjective *short* in the comparative construction results in the implication that the relevant object(s) under discussion are short, whereas the positive adjective *tall* does not imply this. Likewise, a similar presupposition arises for the use in *wh*-questions, where the negative adjective implies that the object being questioned has that property, which does not arise for the use of the positive adjective.

Polarity has an important relationship to scale structure, and the polarity of an adjective will affect how it relates to its underlying scale. As stated before, the antonym of an adjective will use the same scale structure. As we've linked the absolute/relative divide to scale structure, then a relative adjective's antonym will be relative, and similarly so for absolute adjectives and their antonyms. Further, for closed scale adjectives, the endpoint for an adjective will correspond to the opposite endpoint for its antonym. So, if a positive adjective has a maximal degree, then this will be the minimal degree for its negative pair/antonym. Conversely, if a positive adjective has a minimal degree, then this will be its antonym's maximal degree. Since this does not apply to relative adjectives, it has implications for how relative adjective antonyms are treated.

For example, something that is *not tall* need not necessarily be *short*, and vice versa, since relative adjectives lack an endpoint. For absolute adjectives – which have at least one endpoint – then the negation of one of the adjective pair will entail the other. However, this will depend on whether there is a maximal or minimal degree, or both. As an example, compare *full/empty* to *straight/bent*. *Full* and *empty* are closed on both ends. As such, if something is maximally full, then it is minimally empty (i.e. not empty at all). On the contrary, if something is maximally empty, then it is minimally full (i.e. not full at all). This is because the endpoints on the scale that decide the maximal or minimal point for this adjective pair don't just meet, they are the same; the minimal amount of emptiness is the maximal amount of fullness, and vice versa.

At first this seems to be the same for *straight* and *bent*; something that is *bent* is *not straight*, and something that is *straight* is *not bent*. However, while it is fine to talk about both a maximal and minimal degree for fullness and emptiness, it doesn't make sense to talk about a maximal sense of bend, or a minimal sense of straightness. Something is either straight or it isn't, and we don't talk about two straight things differing in their straightness. Likewise, there's no upper-limit on how far something can be bent. If we compare this to a minimal sense of bend and a maximal sense of straightness, we can see that these are perfectly coherent, and that these points are in fact the

same point on a scale. Given the difference in scales and their various endpoints, this leads us to a consideration of the typology of possible scales.

3.1.3 Scale structures

Since adjectives can differ in whether they have maximal or minimal elements, that gives us four logically possible combinations: *totally-open* (no such elements), *upper-closed* (only a maximal element), *lower-closed* (only a minimal element), and *totally-closed* (both a maximal and a minimal element).

	Maximal element	Minimal element
Totally-open	✗	✗
Upper-closed	✓	✗
Lower-closed	✗	✓
Totally-closed	✓	✓

Table 3.1: Typology of possible adjective scales

We can show this by using different types of degree modifiers. These modifiers react differently depending on scale structure, which allows us to test what the scale structure of the adjective is. There are maximality, minimality, and proportional modifiers, which test for upper-closed, lower-closed, and totally-closed scales respectively.

Scale Type	Test	Example
Upper-closed	Maximality	100%, fully, completely, totally, almost, absolutely...
Lower-closed	Minimality	Slightly, a bit...
Totally-closed	Proportionality	Half, mostly, quite...
Open	Openness	Very, utterly, extremely...

Table 3.2: Scale modifier types

As an example, we can use the modifiers *slightly* and *almost*, which test for minimal and maximal elements in the scale structure of an adjective respectively (Rotstein & Winter, 2004; Kennedy & McNally, 2005). *Almost* indicates that something is close to the point of satisfying the given property. Conversely, *slightly* indicates that an object just meets the standard under discussion of having a given property. Following our reasoning about scale structures, we would expect *slightly* and *almost* to interact differently with *bent* and *straight*, due to the differences in the scales of the adjectives; *straight* and *bent* are adjectives with (just) a maximal and minimal element respectively.

(14) a. (i) This stick is slightly bent
(ii) ??This stick is almost bent

b. (i) This road is almost straight
(ii) ??This road is slightly straight

Differences in entailment show whether the standard is on the upper or lower. This arises from how the maximal and minimal elements are treated. When used with a maximal element adjective, *partially* entails that the object does *not* have that property. Whereas for minimal element adjectives, the inference that the object has that property is licensed.

(15) a. The plant is partially dead ⇒ The plant is not dead

b. The bag is partially wet ⇒ The bag is wet

Some adjectives have both a maximal and minimal element in their scales, and so we would predict that both modifiers are acceptable with them. As expected, *open* and *closed*, which have both maximal and minimal elements, are acceptable with both *slightly* and *almost*.

(16) a. (i) This bag is slightly open
(ii) This bag is almost open

b. (i) This bag is slightly closed
(ii) This bag is almost closed

Antonyms have the opposite scale structure. For open and totally-closed scales, this means their antonym is just on the same scale type. But for partially-closed scales, it means that the adjective pairs have the opposite ends of their scales closed.

Open	Totally-closed	Upper-closed	Lower-closed
tall/short	open/closed	dry	wet
big/small	empty/full	straight	bent
wide/narrow	cooked/raw	clean	dirty
heavy/light	visible/invisible	safe	dangerous
high/low	transparent/opaque	pure	impure

Table 3.3: Antonyms and their scale types

For example, *certain* and *uncertain* are antonyms of each other. *Certain* is the positive adjective of the pair, and is acceptable with maximality modifiers, but not with minimality modifiers, meaning that it is on an upper-closed scale. As expected, *uncertain* shows the opposite distribution, as it is the negative member of the pair, and is on the opposite scale.

(17) a. (i) I am absolutely certain
(ii) ??I am absolutely uncertain

b. (i) I am a bit uncertain
(ii) ??I am a bit certain

Conversely, a positive adjective like *wet* has the negative antonym *dry*. *Wet* has a minimal element but not a maximal element, and so the scale that *wet* is on is lower-closed, which leads to *wet* being acceptable with minimality modifiers but not with maximality modifiers. Its antonym *dry*,

then, is acceptable with maximality modifiers, as it's the negative pair to a positive adjective on a lower-closed scale, and so the scale of *dry* is upper-closed.

(18) a. (i) The bag is slightly wet
(ii) ??The bag is almost wet

b. (i) ??The bag is slightly dry
(ii) The bag is almost dry

We can see further evidence for this account of modifiers in evidence from negation. Negation entails the antonym of an adjective pair, and when used to negate one of the pair, leads to a flipped scale structure. Consider the context in which a bag has been drying for a few hours.[12]

(19) a. (i) The bag is completely dry
(ii) ??The bag is completely not dry

b. (i) The bag is almost dry
(ii) ??The bag is almost not dry

(20) a. (i) The bag is completely wet
(ii) ??The bag is completely not wet

b. (i) The bag is almost wet
(ii) ??The bag is almost not wet

Totally-closed scales are special in that have both a maximal and minimal element. Because of this, not only do they accept both maximality and minimality modifiers, but they also allow proportional modifiers, like *half*, or *mostly*.

(21) a. The bag is half/mostly full

b. The pole is ??half/mostly bent

c. The boy is ??half/mostly tall

Since modifiers like *half* specify a point between a maximal and minimal element, scales that lack either of these elements will not be defined. The degraded acceptability of constructions is explained by the incompatibility of some modifiers with different types of scale structures, depending on the maximal and minimal elements. These modifiers, then, provide a useful way of discovering what scale structure an adjective pair has.

However this is not always straightforward, since some modifiers are ambiguous. For example, *pretty* and *completely*, both have an intensificational use, and an endpoint use. In order to disambiguate these uses, it is necessary to look at entailment patterns. When *pretty* is used with a relative adjective, it has an intensificational use, and doesn't entail the property, but when used with an absolute adjective, it entails that the object doesn't have the property (Unger, 1975).[13]

[12] This context eliminates the alternative readings of *almost* in which the bag almost became wet, but did not.

[13] Unger assumes that on these cases that an implicit *close* or *nearly* is inserted into the semantic representation.

(22) a. This stick is pretty long ⇒ This stick is long

b. This stick is pretty straight ⇏ This stick is straight

For *completely*, on the endpoint use, it is not possible to exceed this point without contradiction, whereas the intensificational use allows this.

(23) a. The pole is completely straight... #but you could make it straighter

b. John is completely drunk... but Mary is even drunker

The potential ambiguity of adjectives and modifiers is important, and some modifiers will still be acceptable with adjectives that we would expect them not to be. For instance, take *wet*.

(24) a. The bag is slightly wet

b. ??The bag is almost wet

c. The bag is half/mostly wet

Based on the difference in acceptability between (24a) and (24b) using *slightly* and *almost*, we would classify *wet* as having a lower-closed scale. However, (24c) shows acceptability with proportional modifiers, which should only be acceptable with a totally-closed scale. This can be for a few different reasons. Acceptability can depend on the dimension that adjectives are targeting. For instance, *long* can be measured by a temporal or a spatial dimension.[14] Similarly, *wet* can refer to the degree of saturation of a liquid that an object has, as well as a general use for moisture in a given area. We can see this by using *completely*, which tests for maximal elements, and so is an indication of a (upper-)closed scale.[15] This shows the polysemy of *wet*, and how these meanings differ in scale structure.

(25) a. (i) This is a wet bag
(ii) This is a wet country

b. (i) This is a completely wet bag
(ii) ??This is a completely wet country

Differences in how the property of the adjective applies to the object also shows another factor. We can see this in that (24c) lacks an ambiguity that (24a) has. In the latter, *slightly wet* can mean that either the bag has a general amount of moisture to be considered wet, or that part of the bag is wet. In the former, only the part interpretation is available with *half* and *mostly*.

(26) a. This bag is slightly wet... but just the lower part/all over

b. This bag is half wet... but just the lower part/??all over

[14] Adjectives can also be multidimensional, in which multiple dimensions are considered at the same time, such as *healthy* (Sassoon, 2012). Note the constraint that they must be considered at the same time. *Long* has multiple dimensions associated with it, but it isn't multidimensional because the e.g. temporal and spatial dimensions aren't considered at the same time.

[15] *Completely* is also a proportional modifier.

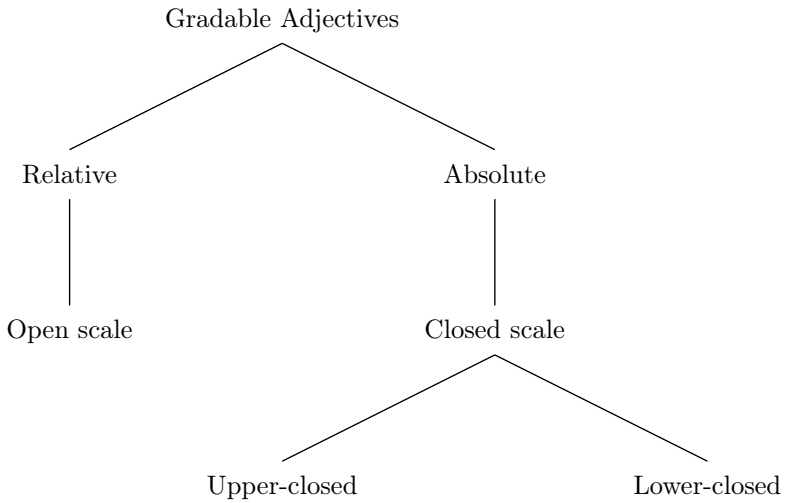


Figure 3.2: Adjective types and scales

The standard of an adjective is related to the element it is targeting on its scale. For example, relative adjectives lack scale endpoints, and so are unacceptable with maximality and minimality modifiers.

(27) a. ??This man is slightly tall

b. ??This man is almost tall

These sentences could be made acceptable, but only when a clear contextual standard is established, which allows a comparison. There could be an element of coercion or polysemy, but I will argue that this is because scales are not lexically specified, and can shift depending on appropriate grammatical and pragmatic context.

3.2 Object-Oriented Depictives and scales

As we've seen, depictives can be gradable. Looking again at the examples given by Aarts (1992) (repeated below), we see that these are fine without *very*, *utterly*, and *extremely*.

(6) a. He painted the house$_i$ (*very) unsanded$_i$

b. He met the Director$_i$ (*utterly) drunk$_i$

c. He ate the nuts$_i$ (*extremely) salted$_i$

Crucially, these are modifiers that force an open scale reading. With closed scale modifiers, the sentences are far more acceptable.

(28) a. He painted the house$_i$ 100% unsanded$_i$

b. He met the Director$_i$ completely drunk$_i$

c. He ate the nuts$_i$ slightly salted$_i$

We can then see that the type of scale in gradable adjectives has an effect on the acceptability of the depictive. Given that we've tied scalar structure to the absolute/relative distinction, then a first hypothesis would be that depictives require absolute adjectives. Gumiel-Molina, Moreno-Quibén, and Pérez-Jiménez (2016), for example, make this claim with regards to Spanish. If absolute adjectives are more acceptable than relative adjectives, then this predicts that modifiers which force a closed scale reading (and hence an absolute reading of an adjective) should repair readings in cases where the scale is coercible or variable. We can see this with OODs in atelic VPs.

(29) a. ??John pushed the cart$_i$ broken$_i$

b. ^{ok}/?John pushed the cart$_i$ completely broken$_i$

But noticeably, this effect is more apparent with OODs than SODs; we can see that (6b) is acceptable as a SOD with an open scale adjective, but not as an OOD.

(30) He$_i$ met the Director$_j$ very drunk$_i$/$*_j$

If depictives were required to be absolute adjectives, then we would predict the opposite acceptability for this sentence. As such, a restriction on depictives based solely on absolute adjectives is insufficient. This suggests it might not be (just) the scalar structure of the adjective that is conditioning acceptability. Hence, it is worth looking at alternative explanations for this distribution. For instance, it could be a case of the relative informativity of the sentence. For example:

(31) John played the guitar$_i$ untuned$_i$/??tuned$_i$

Tuned is the normal, expected state in performing this action. As such, unacceptability of depictives with these predicates may be at least partially attributed to pragmatic effects. Suggestive evidence for this comes from the ability to force contexts in which the depictive is acceptable by signalling that something is a departure from the normal.

(32) John played the guitar$_i$ tuned$_i$ for a change

Here, the sentence's improved acceptability might be put down to the increased relevance of the guitar's tunedness, since this is interpreted as being more salient in some manner. While this is a possible account, there are reasons to think that the scalarity of the adjective is what is relevant. As we can see, the addition of this context also improves the use of *completely*.

(33) a. ?John played the guitar$_i$ completely tuned$_i$

b. John played the guitar$_i$ completely tuned$_i$ for a change

While this could be a coincidence that an improvement of the depictive is matched by an improvement in *completely*, this would be explained on an approach where the scale is the relevant factor, since the improvement of *completely* indicates that the scale structure has changed.[16] Fur-

[16] *For a change* is most likely a modal adverbial. Given work by Lassiter (2011) on the relationship of scalarity and modals, this interaction is potentially explainable in terms of the underlying structure of the scales involved. As such, this could be further evidence for the scalarity of the adjective being the relative factor in OODs, rather than evidence against it. I return to this possibility in the final chapter.

ther, there are some cases in which the more informative state is judged less acceptable than the 'expected' state.

(34) a. ??He carried the bag$_i$ damaged$_i$

b. He carried the bag$_i$ undamaged$_i$

c. He carried the bag$_i$ (still) intact$_i$

The scale structure of adjectives is definitely relevant for the acceptability of depictives, so it is worthwhile to investigate whether a restriction based on absolute adjectives can be refined. On a degree scalar account of absolute adjectives, absolute adjectives can be decomposed into three types of adjectives with different scales.

3.2.1 OODs and scale structure

If depictives are required to be absolute adjectives, then all closed scale adjectives should meet this requirement. Focussing again on OODs in atelic VPs, we can see that out of the types of gradable adjectives used as OODs, totally-closed scale adjectives are more readily acceptable than open scale ones.

(35) a. John carried the bag$_i$ empty$_i$/full$_i$/open$_i$/closed$_i$

b. ??John carried the bag$_i$ heavy$_i$/light$_i$

However, since the antonyms of absolute adjectives are also absolute adjectives, then this predicts that antonym pairs should be as acceptable as each other. However, the data shows that not all absolute adjective pairs are treated the same.

(36) a. John juggled the balls wet$_{[\text{LOWER CLOSED}]}$/??dry$_{[\text{UPPER CLOSED}]}$

b. John juggled the balls dirty$_{[\text{LOWER CLOSED}]}$/??clean$_{[\text{UPPER CLOSED}]}$

c. John carried the pole bent$_{[\text{UPPER CLOSED}]}$/??straight$_{[\text{LOWER CLOSED}]}$

Adjectives that are on a totally-closed scale, or positive adjectives of partially-closed scales are more acceptable than negative adjectives on partially-closed scales. A useful example is the variable acceptability of the adjective pair *drunk* and *sober*. *Sober* is the positive member, and is upper-closed. If the positive polarity of the adjective is the relevant factor, then we would expect it to be more readily acceptable as a depictive than its negative counterpart *drunk*.

(37) a. Mary pushed John$_i$ sober$_i$

b. ??/?Mary pushed John$_i$ drunk$_i$

We also note that with the addition of *completely*, *drunk* improves slightly, but not much. However, given proper context, the use of *completely* shows a marked improvement over just *drunk*.

(38) John, James and Mary went skydiving. Mary was an expert, but John and James were both nervous as they were not as experienced. Perhaps unwisely, John decided to have a drink before jumping, not realising that alcohol has a greater effect at higher altitudes. John was the most nervous and drank a lot, while James had barely a sip, and Mary – being a teetotaller – didn't drink at all. When it came time to jump, John and James both refused to go, and so Mary had to 'encourage' them out. While Mary pushed James$_i$ sober$_i$...

a. ...?she pushed John$_i$ drunk$_i$

b. ...she pushed John$_i$ completely drunk$_i$

An important point here is that *completely* is a maximality modifier, while *drunk* is the negative member on an upper-closed scale. As such, we would expect *completely* to only have an intensificational use. But the use of *very* does not result in an improvement. Further, the use of a minimality modifier doesn't improve the depictive either.

(39) ??Mary pushed John$_i$ very/slightly drunk$_i$

With this, we can capture the restriction on OODs in atelic VPs. Since we've already seen that OODs are more acceptable if they're positive or totally closed, then this behaviour can be explained if we take *drunk* to have an element of scalar variability, and that it can also appear in a totally-closed form. If this is correct, then we should expect proportionality modifiers to be acceptable with *drunk*.

(40) John is half drunk

This scalar variability allows us to capture these differences; when *drunk* is combined with *completely* – and given a suitable context – *drunk* can be interpreted as being totally-closed. In these circumstances, *drunk* is acceptable as an OOD depictive in an atelic VP.

As a descriptive generalisation, we've identified totally-closed scales, and the positive member of partially-closed scales as being most acceptable in atelic OODs. There are a number of ways to lay-out this generalisation, depending on the assumptions one adopts about scale structures and their relation to other divisions. From the point of view of polarity, we can say that all positive adjectives on closed scales are acceptable, and also negative adjectives on totally-closed scales. If we adopt the absolute/relative distinction as being primitive, then another possible way of summarising this restriction is that absolute adjectives are acceptable, except for negative adjectives on partially-closed scales. This generalisation neatly summarise the data, but leaves unexplained why there is a split. It also does not explain why atelic OODs have this restriction, and why they are repaired with certain scale types and not others. To this end, we can split the restriction into two questions that need to be answered.

1. Why are totally-closed adjectives more acceptable than open-scale adjectives?
2. What decides the difference in acceptability between positive and negative members of partially-closed scales?

For this thesis, I focus on the first question, though I return to a consideration of the second

question in chapter 5. So far, we've seen that these restrictions on the OOD only appear to arise with verbs that are atelic; activities or semelfactives. Given this, one might expect that telicity is a requirement for English OODs. Evidence in support of this comes from the fact that depictives are acceptable if the sentence is made telic.

(41) a. ??John pushed Mary$_i$ drunk$_i$

b. John pushed Mary$_i$ into the hallway drunk$_i$

c. ??John pushed Mary$_i$ on the roof drunk$_i$

The addition of a directional adverbial in (41b) shifts the sentence to a telic and acceptable one, while the addition of a locative adverbial in (41c) remains atelic and unacceptable. In a similar vein, sentences that have a telic interpretation can often be cancelled, but when combined with depictives, telicity can no longer be cancelled.

(42) John mowed the lawn... but he didn't finish all of it

a. John$_i$ mowed the lawn drunk$_i$... #but he didn't finish all of it

b. John mowed the lawn$_i$ wet$_i$... #but he didn't finish all of it

Based on evidence like this, some researchers have claimed that OODs require a telic VP (e.g. Motut, 2010).[17] Considering our discussion of scale structure, this initially has a lot of plausibility, as telicity is argued to underlie scale structure (Hay, Kennedy, & Levin, 1999; Kennedy & Levin, 2008). Kennedy and Levin argue that the difference between closed and open scales is that:

> ...the former come with 'natural transitions': the transition from a zero to a non-zero degree on the scale (from not having any degree of the measured property to having some of it) in the case of an an adjective with a lower closed scale, or the transition from a non-maximal to a maximal degree (from having an arbitrary degree of the measured property to having a maximal degree of it) in the case of an adjective with an upper closed scale.
>
> (Kennedy & Levin, 2008, p. 169)

If differences between closed and open scale structures can be explained in terms of telicity, then this would unite facts about the scalar semantics of adjectives in depictives, as well as the differences in acceptability in (41). But this would predict that there should be no OODs with atelic VPs, and that a shift in acceptability should entail a shift in telicity in the VP. As we can see, this is not the case.

(43) a. John ate meat$_i$ raw$_i$ for an hour

b. John played the guitar$_i$ untuned$_i$/#tuned$_i$

c. I juggled the balls$_i$ wet$_i$/#dry$_i$

[17] This also applies to theories that have aspectual restrictions on verb class, e.g. no OODs with activities or semelfactive verbs.

Depictives that use closed scale adjectives are more acceptable than ones that use open scales, but we see no shift in telicity. As such a telic restriction at the VP level is too strong, and empirically inadequate. However, there does appear to be an interaction with telicity. I argue that these differences can be captured, but by formulating differences in telicity and scale structure in terms of a distinction between *quantization* and *homogeneity* (Krifka, 1989; Borer, 2005b, 2005a).

3.3 Quantization and Homogeneity

A predicate is *homogeneous* if it is both *divisive* and *cumulative*, and *quantized* otherwise. These divisions can be illustrated using both the nominal, and verbal domains. The nominal domain shows a split between Mass and Count nouns, while the verbal domain shows a split between telic and atelic verbs.[18]

In the nominal domain, nouns can be separated into two categories; Mass nouns and Count nouns. Count nouns can take plural marking and the indefinite determiner, and show plural marking. In comparison, Mass nouns cannot be pluralised, don't appear with the indefinite determiner, and show singular agreement.[19]

(44) a. (i) Apples, boxes
(ii) ??Golds, waters

b. (i) an apple, a box
(ii) ??A gold, a water

c. (i) The water is/*are cold
(ii) The apples are/*is fresh

The semantic difference between these types of nouns is important in philosophical literature, with Quine (1960) famously stating that the difference between Mass and Count nouns was that the former referred to substances, while the latter referred to objects.[20] The insight here is that objects are internally structured, while substances are not. At the outset, we can distinguish these primarily on whether they are *cumulative* or not.[21]

Something is cumulative if adding two samples of it together results in one sample that has the same property. For example, *water* is cumulative in that adding two samples of water results in a

[18] This raises the question of whether telicity *just is* quantization in the verbal domain. I follow Borer (2005a) in arguing that it is, *contra* Krifka (1992, 1998). I return to further discussion of this point momentarily.

[19] There is actually a more complicated distribution, but I pass over the details here. See Ojeda (2005) on 'Mass plurals'.

[20] Quine's approach has an intimate connection to the philosophical notion of 'reference' and its role in metaphysics. While the substance/object divide is a useful heuristic, it does not hold for all uses of the Mass/Count noun distinction. See Pelletier (2010) for a discussion of the issues.

[21] Later, the condition of being *divisive* was also proposed (Cheng, 1973). Something is divisive if it can be separated into two parts which both have the same property. *Water*, is divisive in that separating two parts of water results in those individual parts being water themselves, while the same does not hold for an *apple*, since dividing a whole apple results in part of an apple, not a whole apple. I return to this concept in a moment.

combined entity that is also water, whereas the count noun *apple* is not cumulative, as combining two samples of apple results in a plurality of apples, not a singular, larger sample of an apple.

Link (1983) presented a algebraic-lattice theory that captured these distinctions formally; Mass and Count nouns can differ in whether they have atomic elements or not. While one need not explicitly adopt Link's formalism, a useful insight to draw from this is that semantics of Count nouns have internal structure, and Mass nouns do not. Bach (1986), applying this reasoning to the verbal domain, noticed that there were structural correspondences between Mass and Count nouns in the nominal domain, and atelic and telic verbs in the verbal domain. Building on Link and Bach's work, Krifka (1989, 1992, 1998, *et seq.*), and Verkuyl (1993) gave a formulation of the telic/atelic distinction in terms of cumulativity and quantization.[22]

Telic events have a "naturally final endpoint" (Smith, 1991, p. 19), and have a more complex internal structure than atelic events, which are taken to be unbounded. If we consider an atelic event like *John walks*, we see that it is cumulative in a similar way to Mass nouns; combining two (temporally contiguous) events of John walking results in an event of John walking; if John walks in the park from 2pm to 3pm, and 3pm to 4pm, then we can say that John walked in the park from 2pm to 4pm.

A telic event, like a Count noun, is internally structured, and so is not homogeneous. A telic event like *John drank a beer* is not cumulative. If we take two events of *John drank a beer*, this does not sum into one event of John drinking a beer; if John drank a beer from 2pm to 3pm, and he drank a beer from 3pm to 4pm, then John didn't drink a beer from 2pm to 4pm, but rather John drank *two* beers from 2pm to 4pm.

Reducing two independent areas down to a single distinction is a powerful theoretical advancement by itself, but we will see that we can take this further, and show that there are in fact interactions between the nominal and verbal domain in terms of quantization and homogeneity; nominalisations show a similar interaction; deverbal nouns derived from atelic predicates are Mass, while ones derived from telic predicates are Count nouns (Alexiadou, 2011).

It is also well known that the direct object can affect the telicity of a sentence, and 'measure out the event' (Tenny, 1994). For example, if the direct object is a bare plural or Mass noun, or is not present, only an atelic interpretation is available. If the direct object is a Count noun, then a telic interpretation is available.

(45) a. John read for an hour/#in an hour

b. John read books for an hour/#in an hour

c. John read the book for an hour/in an hour

[22] I present discussion here in Krifka's terms; Verkyul uses the features ±ADD-TO and ±SQA (Specified Quantity of A), see Verkuyl (2005) for more detail.

Verb	Noun		End Result
+Telic	+Count	→	+Telic
+Telic	−Count	→	−Telic
−Telic	±Count	→	−Telic

Krifka (1992, 1998) presents a compositional semantics that captures this homomorphism between the event and the individual denoted by the object. On his account, verbs are inherently atelic and specify a path, and a quantized object gives rise to the telicity of sentences, by measuring out the event. Krifka classifies the arguments of predicates that have a homomorphic mapping with their argument being the Gradual or Successive Patient.

This mapping captures the intuition that there is a correspondence between a change in the object as the temporal progression of the event continues. So in the case of *John drank a beer*, subparts of the overall event correspond with decreases in the part of the object that is the beer, until the event culminates with the depletion of the parts of the object. The mapping to events ensures that there is a correspondence between the object and the event, while the mapping to objects ensures that there is only one specific object in the event.[23]

This then can be used to formulate the interaction between the predicate and its internal argument; when a quantized Gradual Patient is combined with a verb (of an appropriate type), this results in a quantized verbal complex, while a cumulative Gradual Patient combining with a verb will result in a cumulative verbal complex. As a consequence of Krifka's model, he argues that every (proper) part of a telic event must not be a telic event of the same type, i.e. something that is quantized cannot be cumulative. This raises issues with sentences like:

(47) a. John walked to the store

b. The ship sank

The sentences in (47) are telic, but have proper (sub)parts of their events which are those events. E.g., there is a proper subpart of the ship having sank that is the ship having sank. As a consequence of Krifka's definition of quantization, he is forced to state that although telicity and quantization are related, the relationship is asymmetric; on Krifka's account, a predicate being quantized necessitates that the predicate is telic, but being telic does not necessitate that the predicate is quantized. While initially we might see this split between quantization and telicity as being useful in accounting for the difference in OODs, we see other reasons for revising quantization to match telicity.

In contrast to Krifka's account, Borer (2005a) argues that there may be some quantized predicates

[23] The uniqueness of objects accounts for situations in which an event is repeatable. This requirement means that there is only one object related to the event. To illustrate this, take the sentences:

(46) a. John sang this song on the street corner for three years

b. ?John composed this song on the street corner for three years

If we contrast these two sentences, we can see that the former is pragmatically more acceptable with the durative adverbial while the latter isn't because *this song* can be sung multiple times, but can only be composed once.

that do have such proper parts, i.e. something may be quantized and satisfy cumulativity. As such, Borer revises Krifka's original conditions to add divisiveness:[24]

(48) a. P is *homogeneous* iff P is *cumulative* and *divisive*
i. P is *divisive* iff $\forall x[P(x) \rightarrow \exists y(P(y) \wedge y < x)] \wedge \forall x,y\ [P(x) \wedge P(y) \wedge \text{y} < \text{x} \rightarrow P(x–y)]$
ii. P is *cumulative* iff $\forall x[P(x) \wedge P(y) \rightarrow P(x \cup y)]$

b. P is *quantized* iff P is not homogeneous

(Definition adapted from Borer, 2005b, 2005a)

Returning to the examples given above for telic and atelic events, we see that *John drank a beer* is not divisive, since dividing John drinking a beer into e.g. two parts is not John drinking a beer, but rather is John drank *a part of* a beer. Likewise, *John walks* is divisive, in that a part of the event of John walking is also an event of John walking. Barring practical considerations, we can divide up the event of John walking into ever smaller (sub)events of John walking.

For Borer, given an appropriate syntactic projection (in this case, AspP), a quantized object or suitable adverbial of quantization will induce telicity. This change predicts the emergence of telic readings without co-finality (Borer, 2005a, p. 148). She gives the following examples of this:

(49) a. Kim ate more than enough meat

b. Robin read at least three books

c. We filled the room with smoke

(Example from Borer, 2005a, p. 149)

In addition to co-finality being a special case of telicity, it also makes co-initiality a special case as well. In the cases of co-finality and co-initiality, telicity (quantization) will arise. This will have implications for the formulation of depictives, and I discuss this in more detail in the next chapter. But first, I want to focus on another point raised by Borer, and how this can be related to the scalar variability of sentences. Borer argues that predicates will be interpreted as being quantized or homogeneous depending on the syntactic context they appear in. This very neatly captures the fact that many nouns can be interpreted in either a Mass or Count way, and the same for verbs in regards to the telic/atelic distinction. Take again, the addition of plurals or an indefinite determiner to a seemingly prototypical Mass noun like *water*.

(50) a. There is a water on the table

b. There are several waters in the fridge

In these contexts, *water* no longer functions like a Mass noun, but is interpreted as a Count noun. In (50a), *water* is interpreted similarly to *a bottle of water*, while (50b) receives either the former

[24] Borer uses the term quantity, but I've kept the term quantization here as I believe it is more transparent in this context.

reading, or refers to different kinds of water. The same opposite can be done for prototypical Count nouns as well:

(51) There is dog on the table

The limitations on this is whether a suitable interpretation can be assigned according to world-knowledge. I argue that this can be applied to depictives, and that suitable context can repair readings of depictives. The limits of acceptability appear to be set by whether a given adjective can be interpreted as being on a totally-closed scale. Together, these show the importance of contextual standards, and their role in the interpretation of the depictive. As an example, take the use of *high* and *low*, which are generally considered relative adjectives. But we can see that they're acceptable with depictives.

(52) Mary carried the bag$_i$ high$_i$/low$_i$

A crucial observation is that being in a depictive puts limitations on the meaning of the adjective—it cannot be the case that Mary carried the bag and she was either at a high or low altitude (and hence the bag would be high or low). It can only mean that the bag was carried high or low *relative to how high Mary's possible range of carrying is*. In order to be acceptable, the depictive has strict restrictions on how it is interpreted, and what the depictive property is being compared to. We can see that when in the depictive construction, *high* and *low* take degree modifiers indicating that they have a different scale structure.

(53) a. Mary carried the bag slightly high/low

b. Mary carried the bag almost too high/low

Another way of phrasing this is that the standards are at least partially affected by the context and pragmatic knowledge, and that the variability in scales depends on an appropriate context and interpretation of an adjective with the relevant scale structure. With this, there are two important points worth considering. The first is that there is an issue of scalar variability, with adjectives sometimes being associated with multiple scales. We can see this with *dry*, which is associated with multiple scales.

Kennedy and McNally (2005) distinguish between two different meanings of *dry*; one on which it is the average degree of moisture in the atmosphere, and one on which it is the amount of liquid on a surface. As they note, the former is more or less a permanent property, while the latter is a transient one. In terms of scales, *dry* qua average degree of moisture has an open scale, whereas *dry* qua amount of liquid has an absolute scale.

(54) a. (i) This region is very dry
(ii) ??This table is very dry

b. (i) This region is very dry for the Amazon
(ii) ??This table is very dry for a study desk

The second point is that even though there may be specified values on closed scales, this does not mean they're context-independent. For example, while *full* is an absolute adjective, what counts

as 'full' can differ from situation to situation. Consider:

(55) a. This beer glass is full

b. This wine glass is full

As McNally (2009) notes, for (55a), the usual interpretation is that the glass is full to the brim. However, for (55b), a 'full' wine glass may be less than half of its total available volume. Likewise, a 'full' espresso coffee cup will have volume left over. World knowledge, then, plays a role in the acceptability of scales. I argue that we can use Borer's view to account for the improvement of OODs in atelic VPs through the use of scale modifiers and context. But first, it is important to set out how we are treating scales.

3.3.1 Formalising scales

I assume a λ-categorical language (Heim & Kratzer, 1998), minimally with type e for entities, and type t for truth-values. The type d for degrees is also introduced, and instead of denoting a property, an adjective like *tall* denotes a relationship between the individual and a degree on its scale. A scale is defined as a triple $\langle S,R,\Delta\rangle$, where S is a set of degrees d; R is a transitive, antisymmetric, reflexive ordering relationship $\preceq$ such that it satisfies *totality* and *density*; and Δ is some dimension of measurement (e.g. temperature, width, length etc).

The totality relationship is that for any two degrees, if they are non-identical, then they are ordered with respect to each other. A scale is dense if for any two degrees, there's a degree that exists between them.

(56) a. Totality: $\forall d,d' \in S$: $d \preceq d' \vee d' \preceq d$

b. Density: $d \preceq d' \rightarrow \exists$d$'' \in S$ such that $d \preceq d'' \wedge d'' \preceq d'$

A scale can be ordered so it is either increasing ($\preceq$) or decreasing ($\succeq$).[25] Gradable adjectives are analysed as measure functions, of the type $<d,<e,t>>$.[26]

(57) a. $[[\textit{Gradable Adjective}]] = \lambda d \lambda x.\mathbf{G}(d)(x)$

b. $[[\textit{tall}]] = \lambda d \lambda x.\mathbf{tall}(d)(x)$

This account works straightforwardly for sentences where an explicit degree is given (e.g. *John is six feet tall*), but would result in an apparent type-mismatch if no explicit degree is present (e.g. *John is tall*); the gradable adjective needs to combine with degree morphology in order to give the correct denotation for a property of an individual, $<e,t>$. To handle this, we can posit a phonetically null morpheme *pos*. Because there is no explicit degree given in the positive form of an adjective, the *pos* morpheme has a contextually specified standard $\mathbf{stnd}_c$[27] within its denotation, which is interpreted as the smallest degree on the scale that satisfies the given property. The

[25] We can also define $\prec$ based on $\preceq$: $d \prec d'$ is equivalent to $d \preceq d' \wedge d \neq d'$. $\succ$ is done analogously.

[26] $<d,<e,t>>$ or $<e,<d,t>>$ can be used, the choice mostly depending on the syntactic assumptions used for composing the subject with the main predicate. I adopt the former for ease of exposition.

[27] Alternatively, this can be split into a separate pronominal that *pos* combines with.

morpheme *pos* is of the type <<*d*,<*e*,*t*>>,<*e*,*t*>>, and combines with the adjective to return the proper type for a property.

(58) $[[pos]] = \lambda G \lambda x . \exists d[d \succeq \mathbf{stnd}_c(G) \wedge G(d)(x)]$

In the case of *tall*, this is then interpreted as:

(59) a. John is tall

b. $\exists d[d \succeq \mathbf{stnd}_c(\mathbf{tall}) \wedge \mathbf{tall}(d)(\mathbf{John})\ ]$

Degrees can be compared on the same scale, but not across scales, which explains the inability to order things across different dimensions of measurement (e.g. temperature and length). Importantly, while standards for open scales have to be contextually set, the standard of closed scales default to the maximum or minimum value on the scale. Set-theoretically, we can define the different scale types based on whether they reach or just approach their endpoints. Totally-closed scales have two endpoints on opposite ends of the scale, while open scales have neither.

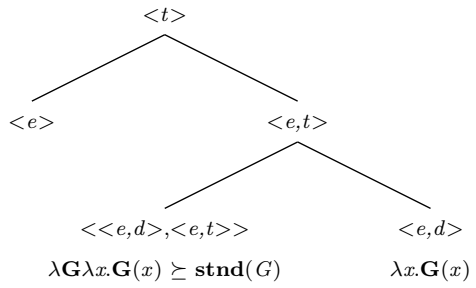
(60) Scale types

a.	*totally-closed*	$\{d : 0 \leq d \leq 1\}$	[0, 1]
b.	*upper-closed*	$\{d : 0 < d \leq 1\}$	(0, 1]
c.	*lower-closed*	$\{d : 0 \leq d < 1\}$	[0, 1)
d.	*open*	$\{d : 0 < d < 1\}$	(0, 1)

In our account, we use the *pos* morpheme due to type considerations. Ideally, we'd want to have an account that combines the different types of *pos* with scales. Kennedy (2007) proposes to unify *pos* by positing the function **s**, which chooses the standard of comparison appropriate to the context.[28]

[28] Kennedy (2007) has gradable adjectives as having the type <*e*,*d*>. This would require *pos* to be of the type <<*e*,*d*>,<*e*,*t*>>, and a measure function like $[[G]] = \lambda d \lambda x . \mathbf{G}(x) \succeq d$ can be used:

(i)



The differences are not important for my account, and I present Kennedy's denotations in the form he uses them.

(61) a. $[[pos]] = \lambda\mathbf{G}\lambda x.\mathbf{G}(x) \succeq \mathbf{s}(\mathbf{G})$

b. $$\mathbf{s}(\mathbf{G}(x)) = \begin{cases} \mathbf{G}(x) = \mathbf{max}(\mathbf{G}) & \text{if } \mathbf{max}(\mathbf{G}) \text{ is defined,} \\ \mathbf{G}(x) \succ \mathbf{min}(\mathbf{G}) & \text{if } \mathbf{min}(\mathbf{G}) \text{ is defined,} \\ \mathbf{G}(x) \succeq \mathbf{stnd}(\mathbf{G}) & \text{elsewhere} \end{cases}$$

He argues that this arises from an economy condition, which seeks to use whatever standard is most available for a scale (in the case of closed adjectives, their endpoint), and only use a point elsewhere on the scale as a last resort.

(62) *Interpretive Economy*
Maximize the contribution of the conventional meanings of the elements of a sentence to the computation of its truth condition.

(Kennedy, 2007)

For gradable adjectives that have (only) a maximum or minimum standard, then interpretive economy will ensure that these are selected over the relative scale interpretation. For totally-closed scales, there are two possible standards to select from. This predicts that totally-closed scales like *open* should be able to have a maximal interpretation in some contexts, and a minimal interpretation in others.

(63) a. If the airlock is open, the cabin will depressurize

b. The ship can't be taken out of the station until the space door is open

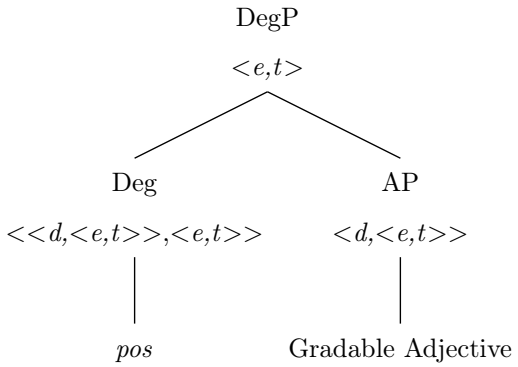
(Example from Kennedy (2007))

This would account for cases of polysemy, like the two interpretations of *dry*, but has a greater difficulty in explaining how meanings of the same type can be compared on different scales. To capture this, I argue that we can split the *pos* morpheme into three types, which are specified for the different scale options, and that these types apply to adjectives as far as pragmatic and world knowledge allows it, in the style of Borer (2005b, 2005a) and her distinction between grammatical knowledge and encyclopaedic knowledge.[29]

This has a number of consequences. Essentially, adjectives can be combined with any form of *pos*. The factors blocking certain uses of adjectives do not stem from the lexical semantics of the adjective, but rather arise from our world knowledge; if a suitable interpretation can be assigned, then it will be acceptable, otherwise the combination will result in unacceptability because there's no coherent interpretation of it. This removes the need for Kennedy's economy position, and splits his function **s** into three separate morphemes instead.

[29] See Husband (2012) and Wyngaerd (2012) for similar accounts.

(64)



a. $[[pos_{\text{OPEN}}]] = \lambda G \lambda x. \exists d[d \succeq \mathbf{stnd}_c(G) \wedge G(d)(x)]$

b. $[[pos_{\text{UPPER CLOSED}}]] = \lambda G \lambda x. \exists d[d = \mathbf{max}_c(G) \wedge G(d)(x)]$

c. $[[pos_{\text{LOWER CLOSED}}]] = \lambda G \lambda x. \exists d[d \succ \mathbf{min}_c(G) \wedge G(d)(x)]$

With this, we can capture the shifting of the scale, and how this improves the acceptability of depictives. An important point here is that depictives are more acceptable as far as a speaker is able to assign a proper contextual interpretation to them. For some speakers, there may be more or less allowance in scalar variability, and hence differences in acceptability. I take this point to be in favour of my account here, as the takeaway point is that depictives are not wholly unacceptable in these environments, but must be interpreted in a certain way, or put within a certain context.

To illustrate this, consider *bent* versus *straight* again. *Bent* is the positive pair of the adjective pair, and so can be predicated of the object of an activity verb without issue. However, when the negative adjective *straight* is used, the interpretation shifts:

(65) a. He carried the pole$_i$ bent$_i$

b. He carried the pole$_i$ straight$_i$

Bent can be a property of the pole and describes how the pole was at the time of the main event, but *straight* cannot be interpreted in this way. Instead, *straight* (if it is deemed acceptable) has to be a property of how the pole is carried; the secondary predicate is interpreted in such a way that there is a bounded range for the property. This can be seen by the fact that scale structure tests give different results for *straight* depending on whether it is used in the OOD or not.

(66) a. (i) The pole is almost straight
(ii) ??The pole is slightly straight

b. (i) He carried the pole$_i$ [slightly straight]$_i$
(ii) He carried the pole$_i$ [almost straight]$_i$

Note that this is not forced on positive adjectives like *bent*, which still shows the same scale structure, indicating that this is a requirement on negative adjectives, which are only acceptable

in activity OODs with totally-closed scales.

(67) a. (i) The pole is slightly bent
(ii) ??The pole is almost bent

b. (i) He carried the pole$_i$ [slightly bent]$_i$
(ii) ??He carried the pole$_i$ [almost bent]$_i$

This puts us in a position to give a better account of OODs. In this chapter, I've shown that the scale structure of adjectives is the relevant factor to the differing acceptability of OODs. The important empirical observation here is that OODs predicated of objects of activity verbs are acceptable if the scale structure is closed, and unacceptable if the scale structure is open. By analysing the open/closed scale distinction more in-depth, I've argued that the difference in scale structure ultimately boils down to a distinction between quantization and homogeneity. By using my quantization analysis, we can capture the variable acceptability of OODs with activity verbs better than previous accounts.

Further, we've seen that the quantization/homogeneity distinction underlies the difference between telicity and atelicity in the verbal domain. I've posited that depictives have a sensitivity to quantization. This not only explains the interaction between the telicity of the sentence and the depictive, and the improvement of depictives with closed scale adjectives, but also correctly predicts that contexts and modifiers that force closed scale readings will improve OOD depictives with activity verbs.

In the next chapter, I expand on this analysis, and further explore depictives and quantization. I will show how my quantization analysis can unite several seemingly unrelated features of depictives. With this in hand, I also extend my analysis to incorporate lexical aspect more generally.

Chapter 4

Depictives and quantization

So far we have seen that the quantization status of the depictive conditions its acceptability. Quantization cuts across a number of different areas of the grammar. If quantization is relevant to depictives, then we would expect to see interaction with depictives as far as different parts of the grammar reflect this distinction or interact with it. This makes a number of testable predictions to the effect that depictive acceptability should change with various construction types. At first pass, this should seem to predict that only Stage-Level Predicates (SLPs) can be depictives. However, while this has been claimed in the past, we have seen that in chapter 1 that this cannot be the case. But SLPs do show a special interaction with depictives and there is a strong preference for depictives to be SLPs, and this should be explained.

I will show how this preference can be explained in terms of quantization, but does not necessarily mean that depictives are restricted to being SLPs. I show how other factors can influence the appearance of ILP depictives. By demonstrating how such factors can interact, I show that such an analysis makes predictions about the relationship of the quantization status of the object and the depictive, which can explain previously overlooked phenomena.

Based on this and the behaviour demonstrated in the previous chapter, I formulate the Depictive Aspectuality Constraint, which captures these factors. In essence, I argue that depictives are sensitive to quantization. The acceptability of depictives depends on the orientation of the depictive (i.e. whether it is an OOD or a SOD), the type of entity it is predicated of (e.g. Count vs Mass noun), and the status of the VP it is in (e.g. telic or atelic). I show how this constraint not only captures the behaviour of depictives, but explains how they can be repaired. I show that quantization is at the root of understanding how depictives function.

However, I will also show that quantization is only part of the story, and I address the limitations of the Depictive Aspectuality Constraint as formulated purely in terms of quantization. So far I have concentrated mostly on OODs predicated of objects of activity and accomplishment verbs, but this leaves open semelfactives and achievement verbs. Building on my quantization analysis, I show how my Depictive Aspectuality Constraint can be reformulated to consider lexical aspect more generally, and extend its empirical coverage of depictive behaviour to capture depictive behaviour with objects of achievement and semelfactive verbs as well.

4.1 The Stage-Level Predicate Preference

As noted in chapter 1, the acceptability of depictives appears to be dependent on whether they are SLPs or ILPs, with depictives restricted to being SLPs.

(1) a. (i) John arrived drunk
(ii) ??John arrived French

b. (i) John returned bloody
(ii) ??John returned blond

However, researchers have differed on the strength of the SLP restriction, ranging from claiming that ILPs are outright banned (Rapoport, 1991), to arguing that ILPs are acceptable if context allows a transitory interpretation (Rothstein, 1983), to arguing that ILPs are acceptable in depictive constructions (Condoravdi, 1992; McNally, 1994). Regardless of position on ILPs, it is clear that there is a preference for depictives to be SLPs. As such, it is important not only to explain the status of ILP depictives, but also the preference for SLPs.

In general, properties that receive a transitory interpretation are acceptable as depictives. For example, (1aii) is interpretable in a number of contexts. For example, if John is travelling to France and is waiting for citizenship papers to be processed during his flight, then (1aii) is acceptable. Or, if *French* is interpreted stereotypically, such as in John arrives as a costume party dressed as a Frenchman, then it is also acceptable.

Likewise, for (1bii), the most straight-forward interpretation is that John was not blond when he left, which accords with the change of state interpretation enforced by the depictive construction. However, we can also imagine a situation in which we expected John to change hair colour, e.g. a scenario in which all new employees of a company have dyed their hair red. John's blondness is then unexpected, or informative in some manner.

In both these cases, the depictive is being analysed as something that is either temporary, or signals a change from one point to another. It is important to note that *French* on the citizenship papers reading doesn't become less permanent. The question here is whether this change signals a coercion from ILPs to SLPs or not. I argue that this issue arises from real world knowledge about permanent properties and their relationship to the ILP/SLP distinction, and that permanence of properties is not a good guide to whether a property is a SLP or ILP.[1] Consider again the examples given in chapter 1.

(2) a. Poe died a pauper

b. They left the Army fervent noninterventionists

c. My dad was born compulsive and will die compulsive

d. The tablecloth went to the cleaners white and came back yellowish

(Examples from McNally, 1994)

The example (2a) is of particular importance, as it is largely agreed upon that nominal predicates are always individual-level (Fernald, 2000, p. 13). Fernald argues against a coercion account in depictives, noting that:

[1] This echoes earlier points, such as Carlson (1977, p. 72) noting that *be dead* is a SLP.

> Although change-of-state predicates are SLPs due to the fact that they involve a state changing at a particular time, the result of a change of state is still a state. [...] A change of state is an eventuality that involves a change in the truth value of a stative predication. Changing the truth of a proposition does not require the ILP/SLP status of the predicate to change. Thus, we conclude that a changed state (itself the result of a change of state) preserves the ILP/SLP status of the original predicate. Therefore, the predicative final NP in examples like [2a] are ILPs, after all. So both SLPs and ILPs can appear in depictives.
>
> (Fernald, 2000, p. 31)

In discussing whether ILPs are coerced, it is important to distinguish between a grammatical change and a pragmatic/world-knowledge change. For instance, consider the following example from Chierchia (1995):

(3) John was intelligent on Tuesday, but a vegetable on Wednesday

As Chierchia (1995, p. 178) points out, if we "imagine that John has a double personality which involves switching his mental capacities on and off in an abnormal manner", then (3) is acceptable. This is not an instance of coercion, but rather changing the background knowledge and not the meaning of *intelligent*. A key thing to note about such examples is that speakers understand what must change in order for such a sentence to become felicitous. I take this to be evidence that there is a strong preference for SLPs.

This then raises the question of why there is a preference for depictives to be SLPs. Following Husband (2012), I will argue that the SLP/ILP distinction reflects a grammatical distinction between quantization and homogeneity, and it is again the underlying factor of quantization that depictives are sensitive to.[2]

4.1.1 Quantization and Stage-Level Predicates

In a traditional feature analysis, ILPs and SLPs differ in the 'telic' feature (Smith, 1991; Olsen, 1997; Kearns, 2000),[3]. The presence of this feature is given as the reason why SLPs are interpreted as being transitory.

---

[2] Cf. Jäger (1996, 1999, 2001), who argues that the SLP/ILP distinction is actually a cluster of phenomena. Jäger (1999) breaks down the SLP/ILP distinction into a combination of three properties; whether the predicate admits a weak/existential reading of indefinite subjects, whether the predicate can occur in the non-finite complement of verbs of perception, and whether it denotes a transitory property. For our purposes, whether a property is transitory is most important – Jäger argues that whether the predicate is transitory or not is pragmatic in nature and not a grammatical feature. I agree that there is a pragmatic/world-knowledge factor to this, but will maintain that the distinction corresponds to a grammatical feature.

[3] I use privative features here, as it conserves monotonicity, and can be used to easily capture shifts between verb classes.

	Dynamic	Durative	Telic
SLP	0	+	+
ILP	0	+	0

Table 4.1: Feature classification of SLPs and ILPs

We have already shown that telicity has a correspondence to quantization, and so SLPs have a correspondence to quantization. This correspondence to quantization can further be demonstrated by using the distinction between closed and open scale adjectives, and their interaction with the SLP/ILP distinction. To show this, consider the difference between generic and existential interpretations of statives. Differences in the direct object that a stative verb takes can result in a difference between a stage-level and individual-level interpretation:

(4) a. Veterans remember

b. Veterans remember battles

c. Veterans remember this battle

(Example from Fernald, 2000)

The presence of a specific direct object licenses an existential interpretation of *Veterans* (i.e. some specific veterans remember this battle), whereas a bare plural or Mass noun allows only a generic reading. This is strikingly similar to the situation where the direct object affects the telicity of the VP with eventive verbs.

Husband (2012) demonstrates that the difference stems from whether the direct object is quantized or not, and that a quantized direct object allows for an existential interpretation, whereas a homogeneous one only allows a generic interpretation. Husband also shows that whether scalar adjectives are open or closed scale can affect the interpretations available:

(5) a. Whiskey bottles are brown

b. Whiskey bottles are full

(Example from Husband, 2012)

While (5a) allows only a generic reading, (5b) also allows an existential reading. Husband argues that existential interpretation is a property predicating over a single (quantized) stage of an individual, whereas a generic interpretation is predicated over all (homogeneous) stages of an individual. Closed scale adjectives have telic endpoints and are quantized, whereas open scale adjectives are homogeneous (Kennedy & Levin, 2008; Husband, 2012).

On the basis of evidence like the interaction above, Husband concludes that SLPs are quantized, while ILPs are homogeneous. While traditionally the SLP/ILP distinction has been argued to be a lexical one, Husband (2012) proposes that the structure that adjectives are embedded in gives the event structure, similar to Borer's approach to the Mass/Count distinction, and telicity.

If there is a requirement for a depictive to be quantized, then this explains the preference for SLPs. However, an obvious issue here is that if ILPs are not quantized, and quantization is a requirement, then why can ILPs appear in the depictive construction? Crucially, McNally (1994, p. 5) observes that ILP depictives are acceptable when the main clause supports a change-of-state reading of the depictive. McNally argues that there must be a temporal parameter. So, in the case of *My dad was born compulsive*:

> Although we normally individuate a state of affairs such as my father's being compulsive maximally, i.e. we consider there to be exactly one such state of affairs extending for e.g. my father's entire life, we may, in virtue of the atelicity of individual level properties, nonetheless take any subportion of the interval in which his compulsiveness obtains and identify that with a state of affairs of his being compulsive - including an interval that is coextensive with his birth.
>
> (McNally, 1994, p. 8)

On McNally's view, a depictive is acceptable if it holds over the same temporal interval as the entity its predicate of, and pragmatic reasons generally rule out ILPs. Taking McNally's insight, I argue that ILPs are acceptable as depictives in these cases because the change of state is associated with telicity, and introduces quantization into the verb-object-depictive complex.

In the same way that a VP can be made telic through the addition of a certain type of adverbial, I argue that quantization can be introduced into the overall verb-object-depictive complex, and that a depictive is acceptable if this quantization is present. In effect, this means that depictives do require quantization, but that quantization needn't come from the depictive itself, and can be introduced in multiple ways.

Suggestive evidence for this comes from the fact that ILP OODs are harder to find than ILP SODs, which McNally notes. This mirrors the sensitivity to verb classes that adjectival OODs have that SODs don't. She gives the following examples of ILP OODs:

(6) a. Ernest's parents sent him$_i$ off to boarding school an immature brat$_i$, and he came back just as bratty

b. George Bush was born a Republican, and they will bury him$_i$ a Republican$_i$

In the case of *sent*, it is useful to see how much the sentence can be altered while still retaining acceptability. The sentence is still acceptable when the goal is dropped, but is degraded if the particle *off* is removed:

(7) a. They sent him$_i$ off an immature brat$_i$, and he came back just as bratty

b. ?They sent him$_i$ to boarding school an immature brat$_i$, and he came back just as bratty

Similarly, *bury* is an accomplishment, the object of which is less restricted than other verb classes for OODs. Roughly similar examples for other verb classes are largely unacceptable.

(8) a. ??John watched the politician$_i$ a president$_i$

b. ??The team acquired the player$_i$ a winner$_i$

c. ??John hit the kid$_i$ an immature brat$_i$

Here, we see again a trademark interaction of the depictive with verb classes. Like the interaction with activity verbs and closed scale adjectives, I argue that this can be traced to quantization and the manner in which it can be introduced into the verb-object-depictive complex. Leaving further details aside for the moment in how this functions, we can see that we've identified a number of different phenomena involving depictives, especially object-oriented depictives.

- Preference for depictives to be SLP; ILP depictives are acceptable when there's a change of state
- Telic modifiers improve OODs with activity verbs
- Closed scale adjectives are more acceptable than open scale adjectives for OODs

Looking at the quantization/homogeneity distinction, we can see that these improvements in acceptability are all associated with quantization.

	Quantized	Homogeneous
Verbal	Telic	Atelic
Adjectival	Absolute	Relative
Predicates	SLP	ILP
Nominal	Count	Mass

Table 4.2: Quantization/Homogeneity distinction across different domains

This then makes the that prediction we should see an interaction between depictives and Mass nouns. As discussed in the previous chapter, the Mass/Count distinction in the nominal domain shows structural similarities to the atelic/telic distinction in the verbal domain; Mass nouns and bare plurals are both cumulative and divisive, and so are homogeneous. This homogeneity would pose an issue for depictives, as quantization is a requirement.

4.1.2 Mass nouns, Bare plurals, and habitual readings

As expected, we see such an interaction, especially for OODs predicated of Mass nouns. When the object of a sentence is a Mass noun or a bare plural, the addition of an OOD causes a habitual interpretation to be favoured over an episodic interpretation.

(9) a. John drank beer

b. John drank beer$_i$ warm$_i$

In (9), the addition of the OOD *warm* leads to a strong preference for a habitual interpretation, and an episodic interpretation becomes much more dispreferred as compared to the sentence minus the secondary predicate. This effect is consistent across verb classes.

(10) a. John drank milk$_i$ warm$_i$ [Accomplishment]

b. John pushed carts$_i$ empty$_i$ [Activity]

c. John noticed bees$_i$ angry$_i$ [Achievement]

d. John knocked vases$_i$ full$_i$ [Semelfactive]

However, when a determiner or numeral is added, this effect disappears.

(11) John drank the/a/five beer(s) warm... and went home

Notably, the effect disappearing happens with all determiners, regardless of whether they are weak (property-denoting) or strong (quantificational) (Milsark, 1977; McNally, 1998). This is expected on a quantized/homogeneous approach, as weak determiners are grouped with strong determiners because they are quantized, while only Mass nouns and bare plurals are homogeneous.

Mass Noun	**Bare Plural**	**Bare Numeral**	**Weak Determiner or Quantifier**	**Strong Determiner or Quantifier**
Weak				*Strong*
Homogeneous		*Quantized*		

Table 4.3: Weak/Strong distinction vs Quantization/Homogeneity distinction

This predicts that we should see the same effect with bare plurals, since they are grouped with Mass nouns due to being homogeneous. As expected, we see that this is true.

(12) a. John drank beers... and went home

b. John drank beers warm... ??and went home

We also see that the addition of some adverbials allows an episodic interpretation, but others do not; noticeably, directional adverbials allow for episodic interpretations, whereas this does not hold for locative ones.

(13) a. (i) John drank beer warm on the way to the beach
(ii) On the way to the beach, John drank beer warm

b. (i) John drank beer warm on the beach
(ii) In England, John drank beer warm

This accords with observations made about activity verbs and depictives in the last chapter, in that directional adverbials improve depictives but locative adverbials do not. We would expect then habituality to have a tie to quantization somehow, but how is this mediated? To handle habitual (and generic) interpretations of sentences, we can introduce a quantifier GEN (Krifka et al., 1995). GEN is a covert Adverb of Quantification (AdvQ), which takes scope over the entire sentence. A well-known phenomena is that AdvQs may range over the interpretation of the event or the interpretation of the subject (Milsark, 1974; Lewis, 1975; Heim, 1982; Doetjes, 1997).

(14) a. During the summer, water in the pond mostly evaporates

b. Water in the pond is mostly lost through evaporation

(Example from Borer, 2005a)

In (14a), the AdvQ ranges over the subject, while in (14b) it ranges over the event. We can see this in comparing the readings; in (14b) it is the case that most events of water being lost are those of evaporation, while (14a) only requires that most of the water evaporate. Crucially, when a DP-internal quantifier is added, the AdvQ can only range over the event.

(15) Most/all water in the pond mostly evaporates

Borer argues that this can be accounted for by an interaction between the AdvQ and quantization. On this view, by assuming that homogeneous OODs like *warm* must be predicated of a quantized object, and that speakers analyse sentences in a way that maximize the likelihood of interpretation, we can give an explanation of the preference for habitual interpretations with depictives. With the requirement for a quantized object, a depictive predicated of a Mass noun or bare plural object can receive a legitimate interpretation if GEN is present. As such, this leads to the preference for a habitual interpretation, as the speaker assumes that the object is appropriately quantized, which would be achieved if the covert GEN operator is present.

If overt material or context sufficient for appropriate scalar variability is provided, then the GEN quantifier does not need to be interpreted as being present, and so an episodic interpretation is possible. This means that the habitual interpretation is a preference, but not a necessity for Mass/bare plural objects, as quantization can be introduced in a number of ways. This account has the added benefit of explaining the well-noted fact that generic interpretations improve depictives (Halliday, 1967; Stump, 1985; Hale & Keyser, 1998). Here, GEN can introduce quantization, which improves the addition of depictives.[4]

(16) a. He won't drink orange juice$_i$ neat$_i$ fresh$_i$

b. You can't cook chickens$_i$ tender$_i$ young$_i$

(Example from Simpson, 2005)

In the case of the preference for habitual readings, this predicts that if quantization is introduced into depictives predicated of Mass nouns and bare plurals another way, this should improve the acceptability of an episodic reading. The natural way of testing this is by manipulating the scale structure of the adjective. Examining *warm*, we see that it is a relative adjective. With an absolute adjective like *raw*, we can see that the preference for the habitual interpretation has largely decreased, and that many outright prefer an episodic interpretation if the construction isn't ambiguous between them:

[4] It is not clear why genericity and quantization are associated, and I do not give an account for what this interaction is, only that there is one. Borer offers a particular mechanism for this interaction, but it is not required for my analysis.

(17) a. I ate meat raw... and went home

b. John ate meat raw... and went home

c. I ate cookie dough raw from the store, will I die? (Google)

d. We even drank eggs raw (Google)

e. I drank milk raw and my stomach started to hurt so bad (Google)

4.2 The Depictive Aspectuality Constraint

As shown in the previous section, again we see that introducing quantization improves the acceptability of depictives. However, the most important fact is that quantization can be introduced into the sentence in multiple ways. Focussing on OODs, we can see a systematic interaction with quantization and acceptability of sentences. Based on these observations, I formulate the Depictive Aspectuality Constraint (DAC):

(18) **Depictive Aspectuality Constraint (1st Version):** *For an Object-Oriented Depictive, the verb-object-depictive complex must be aspectually compatible with quantization.*

On this view, an OOD is more acceptable if the verb-object-depictive complex is suitably quantized. The verb-object-depictive complex can become quantized in a number of ways:

Domain	**Improves OOD**	**Degrades OOD**
Verbal	Telic VP	Atelic VP
Nominal	Specific object	Mass or Bare plural object
Adjectival	Closed scale adjective	Open scale adjective
Predicate	Stage-Level Predicate	Individual-Level Predicate
Event	Change of state interpretation	No change of state interpretation
	Quantization	**Homogeneity**

Table 4.4: Factors that affect acceptability of Object-Oriented Depictives

Notably, this restriction does not apply to accomplishments, which is expected under the Depictive Aspectuality Constraint because accomplishments are telic and durative. This constraint also has the benefit of explaining why depictives can be repaired by introducing other material from a range of sources, or context which affects the interpretation of the sentence; in these cases, quantization is being introduced into the verb-object-depictive complex.

However, the constraint as currently formulated incorrectly predicts that objects of achievement verbs should also be acceptable. If we compare the verb classes with SLPs and ILPs, we see that the uniting factor appears to be the twin requirements of durativity and telicity (Olsen, 1997).

	Dynamic	Durative	Telic
Accomplishment	+	+	+
Activity	+	+	0
Achievement	+	0	+
Semelfactive	+	0	0
SLP	0	+	+
ILP	0	+	0

Table 4.5: Feature classification verb classes and states

Both SLPs and accomplishment verbs are durative and telic, and they are the least restricted in terms of their acceptability as depictives. ILPs and activity verbs, on the other hand, are durative but not telic. However, if a temporal bound is introduced in the sentence, such as a change of state for the main verb if the depictive is an ILP, or a directional adverb for activity verbs, then depictives become more acceptable, because they now have a temporal point to be predicated of.

This explains the change in acceptability for activity verbs when made telic, but leaves the shifting acceptability of achievements and semelfactives unexplained. Looking again at the feature chart, we can see that the key factor here is durativity. The verb-object complex of accomplishment verbs is both telic and durative, but objects of activity, achievement, and semelfactive verbs do not automatically meet this standard, as they are atelic or nondurative or both. We see that in the cases where quantization can be introduced, this improves the acceptability of depictives where durativity is already present. As we've seen, this can be satisfied in a number of ways. For example, the quantization requirement can be satisfied through properties that are structurally correlated to quantization (e.g. telicity). Furthermore, they can be introduced into the construction in multiple ways. In fact, the same holds for durativity, which – similar to quantization – can be introduced through scale structure.

4.2.1 Depictives and durativity

Previous work on resultatives and scale type shows a correlation between the durativity of an event and the gradability of scales (Wyngaerd, 2001; Beavers, 2002; Wechsler, 2005); durative events require gradable scales, while punctual events require non-gradable scales. Beavers (2008) expands on this, arguing that dynamic predicates correlate durativity with gradability. Gradability and quantization map onto durativity and telicity respectively, and so when the depictive is a closed scale adjective, it can introduce quantization and durativity into the verb-object-depictive complex.

Focusing on achievements, we see that they are distinguished from accomplishments by being nondurative. If we can introduce durativity into the depictive construction similar to telicity with activity verbs, then this should improve the acceptability of OODs with achievement verbs. If we could mix across domains, then we would expect that gradable, open scale adjectives would be acceptable with achievements. Attested examples can be found:

(19) a. I met him very drunk (Google)

b. [We] both met him$_i$ drunk$_i$ at 4am in McDonalds (Google)

c. (In the context of realising a house has heated tiles) I just noticed the tiles$_i$ warm$_i$ today (Google)

d. I've vaguely noticed (and expected) some warmth from the gearbox tunnel on long journeys. Recently though I noticed it HOT rather than warm. (Google)

We can revise the Depictive Aspectuality Constraint accordingly:

(20) **Depictive Aspectuality Constraint (2nd Version):** *For an Object-Oriented depictive, the verb-object-depictive complex must be aspectually compatible with durativity and quantization.*

Features corresponding to durativity and telicity need to be introduced into the depictive-event complex. The morpheme *pos* from the previous chapter has three forms, *open, upper closed,* and *lower closed*. All three of these are gradable, and the latter two also introduce quantization into the adjective. These features can satisfy the Depictive Aspectuality Constraint.

4.2.2 Co-initiality and the Depictive Aspectuality Constraint

Following the analysis laid out in chapter 2, depictives have a spatiotemporal argument, and this argument must align with the matrix event it is composing with. The secondary predicate is a small clause that introduces its own event which needs to compose with the matrix event. The Pr head introduces a thematic role and this must be mapped to a temporal bound in the matrix event.

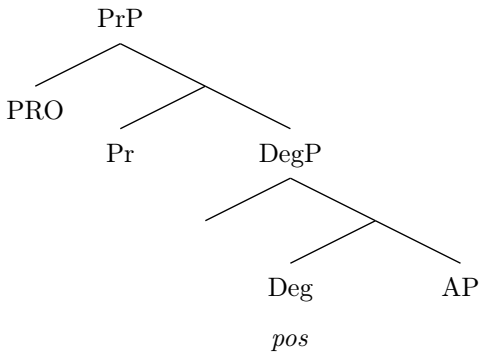


Figure 4.1: Adjectival Depictive

The depictive must have an identifiable temporal bound and a duration that overlaps with the runtime of the main event. Furthermore, we see that from previous discussion in the second chapter that the depictive must be *co-initial* with the matrix event. That is, the property in the depictive must hold from the beginning of the relevant temporal bound of the matrix event. We see from the below example (repeated from chapter 2), that the depictive need not hold of the entire matrix event:

(21) They dissected the animal$_i$ alive$_i$

This holds for SODs and OODs, and so we can revise the Depictive Aspectuality Constraint a final time:

(22) **Depictive Aspectuality Constraint (Final Version):**

1. *the depictive must be co-initial with the matrix event, and*
2. *for Object-Oriented depictives, the verb-object-depictive complex must be aspectually compatible with durativity and quantization.*

4.3 Lexical aspect and the verb-object-depictive complex

In this chapter, I've reviewed the properties of depictives, concentrating on Object-Oriented depictives. Building on the observation in chapter 3 that quantization affects acceptability, we can see that there is a more general interaction with lexical aspect. Objects are involved in measuring out the event, but the object being quantized is not always sufficient. In the cases of verbs that aren't telic and durative, these features need to be introduced into the overall verb-object-depictive complex. In the case of durativity, this can be done through gradable adjectives, while for telicity this can be introduced by appropriate adverbials or absolute adjectives.

If the VP is quantized (telic) and durative, and the object is quantized (i.e. not a Mass noun or Bare plural), then (object-oriented) depictives can predicate of the object straightforwardly if the depictive is a SLP. If the depictives is an ILP, then there is a further requirement of having a change of state reading. If these conditions are not met, then they can be repaired in various ways by introducing the missing feature into the verb-object-depictive complex in some way.

As we've seen for activity and achievement verbs, closed scale adjectives will be more acceptable as depictives because closed scale adjectives can introduce quantization and durativity into the complex. The addition of open scale adjectives repairs OODs with achievement verbs, but not OODs with activity verbs, due to the requirement of quantization for activity verbs. Since quantization can still be introduced into the complex by making the entire VP telic, this explains why activity verbs with OODs are repaired by directional adverbials, since directional induce telicity while locatives do not.

In this chapter, I've shown how lexical aspect is important for OOD acceptability. In essence, as long as the relevant combination of features is introduced into the complex, an OOD will be rendered more acceptable, modulo possible issues with world knowledge. This is an improvement over previous analyses in not only correctly capturing the variable acceptability of OODs with different verb classes, but also unites the various properties of depictives.

Chapter 5

Conclusion and future directions

The aim of this thesis has been to give a firmer empirical basis to depictives, and develop a conceptual framework for analysing their behaviour. I have concentrated on depictives in particular because they have often been ignored in the study of secondary predicates. Resultatives have received much more attention, because it is felt that they have a more 'complex' event structure than depictives. This is a shame, as depictives are intriguing because they are both arguments and adjuncts, and it is precisely these structural and semantic features that allow them to reveal much more about the structure of the grammar that would be otherwise expected.

In part due to this neglect, there have been many incorrect generalisations about depictives that have proliferated throughout the literature on secondary predicates. While it has been commonly observed that OODs are generally more acceptable when predicated of objects of accomplishment verbs, this observation has often lead to incorrect generalisations; it is still common to see the claim that depictives must be SLPs, or that OODs cannot be predicated of objects of activity verbs.

Further, most analyses have been unable to fully account for OOD behaviour. In this thesis, I have given a novel analysis of adjectival OODs that not only explains this behaviour, but successfully predicts and captures previously unnoticed interactions with other parts of the grammar. In particular, I have concentrated on quantization and its role in depictives. Quantization cuts across a number of different domains of grammar, and the status of quantization in these domains is especially important in licensing depictives. Quantization in the verbal, nominal, adjectival, and predicative domain all have effects on the acceptability of depictives, a fact that has been previously unnoticed. These effects are predicted by my analysis, and unite it with common observations about the interpretation of depictives.

Building on this, I have shown how adjectival OODs are sensitive to lexical aspect, and that quantization and durativity condition the acceptability of OODs; a depictive is rendered acceptable if the conditions of durativity and quantization are met, and acceptability quickly degrades in cases where these conditions are violated. In essence, the prototypical depictive is one that is durative and quantized. A depictive exists as a temporary property that holds of the entity it is predicated of, and must align with the beginning of the main event.

Perhaps the most novel finding of this thesis is that quantization and durativity can be introduced into the verb-object-depictive complex through various means, and that a structural feature that corresponds to the required durative or quantized feature leads to a corresponding increase in the acceptability of the depictive. There are a number of ways that this interaction could be implemented, but are highly dependent on the system chosen. To this end, I have steered away

from giving explicit formalisations of depictives, and have kept my analysis largely theory-agnostic, largely in order to keep focus on the overlooked features of depictives, particularly their interaction with lexical aspect. We can then return to the two questions highlighted at the end of chapter 2.

1. What determines the restriction on verb classes for OODs?
2. Why are depictives interpreted as being temporary states?

We now see these can be all answered through the relationship of depictives to quantization. In the case of question 1 and 2, this is fairly direct; OODs with activity verbs are acceptable if quantized in some manner, and depictives are interpreted as being temporary states because of this quantization requirement. In terms of question 3, the relationship to quantization is more indirect, but still strong. Depictives need to align with the beginning of the matrix event, and quantization is related to this need for a temporal bound to align with. This temporal bound cannot be mere overlap, but is quantized and is a temporary property (a Stage-Level Predicate), or has a contextually specified change of state interpretation (in the case of Individual-Level Predicates).

While this thesis has concentrated on capturing the behaviour of depictives otherwise overlooked in other literature, there still remain a number of questions about depictives, and there are many potential avenues of further investigation. In the next section, I sketch a few, using some examples to illustrate them.

5.1 Future directions

5.1.1 Extending the Depictive Aspectuality Constraint

I've argued that the Depictive Aspectuality Constraint is a condition that applies stronger to English OODs than English SODs, because OODs are predicated of the object, which is involved in measuring out the event. Taking a decompositional approach to lexical aspect (e.g. Travis, 2010), we can split the VP up into VoiceP, AspP, and the bare VP. VoiceP is the site of durativity, where AspP is the site of telicity.

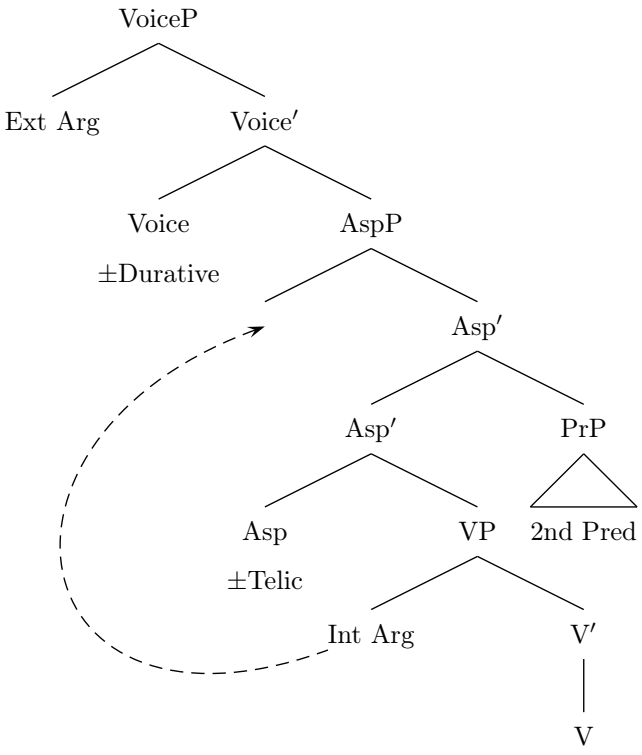


Figure 5.1: Extended Verb Phrase with Object-Oriented Depictive

I hypothesize that because the OOD is inside AspP, it interacts with the quantization status of the overall verb-object complex. SODs, on the other hand, are predicated of the external argument and are Voice′ adjuncts. As such, they are outside the domain of AspP. Because of this, they have fewer restrictions.

The restrictions on distribution (albeit, less restrictive than OODs) of SODs indicates that depictive constructions have a set of particular requirements that are preferred, e.g. the SLP preference holds even for SODs, and change of state interpretations are required. The fact that but that there are greater restrictions on OODs must be attributed to its position in the overall extended VP. Further, since OODs predicated of specific objects of accomplishment verbs show the least amount of restrictions, then it must be concluded that being a lower attached adjunct affects the requirements for OOD acceptability.

This thesis has argued that (lexical) aspectuality is a key factor for licensing depictives. This then predicts that structures that affect aspect should show interactions with depictives. For example, the subjects of unaccusatives and passives can determine the telicity of the sentence, and so are involved in the computation of the aspect of the sentence (Tenny, 1994). We would then expect SODs predicated of unaccusatives and passives to behave differently; this predicts that unaccusative and passive SODs should pattern more like OODs than SODs of other types. While clear data is difficult to find, we do find suggestive evidence to indicate this might be the case:

(1) a. The shipment arrived pure/??impure

b. The rocket landed undamaged/??damaged

Like OODs with activity verbs, unaccusatives appear to be more acceptable with closed scale adjectives, and less acceptable with open scale adjectives. We can see this further comparing unaccusatives and passives with unergatives.

(2) a. John$_i$ jumped completely/very sober$_i$ [Unergative]

b. John$_i$ fell completely/??very sober$_i$ [Unaccusative]

c. John$_i$ was pushed completely/??very sober$_i$ [Passive, Activity]

Interestingly, passives generated from accomplishments don't show the verb class restriction, while for other verb classes they do:

(3) a. The body was found completely/??very cold

b. Mary was found completely/??very drunk

c. The first one was eaten very warm (Google)

d. Entree can be eaten completely cold, directly from the pouch (Google)

Depictives predicated of unaccusative show a number of interesting properties. The acceptability of (some) depictives seems to be related to the 'unaccusativity mismatch' (Levin, 1993), in which only a subset of unaccusative verbs allow *there*-insertion. For example:

(4) a. (i) A man arrived
(ii) There arrived a man

b. (i) *A ship sank
(ii) *There sank a ship

There-insertion degrades the acceptability of depictives:

(5) a. (i) Many members were present drunk
(ii) *There were many members present drunk

b. (i) A man arrived drunk
(ii) ?There arrived a man drunk

There-insertion is also well-known to interact with the SLP/ILP distinction (Kratzer, 1995). Discussion of these issues is beyond the scope of this thesis, but I postulate that this is due to differing structures for unaccusatives. See e.g. Alexiadou and Schäfer (2010) for discussion with regards to the unaccusativity mismatch and *There*-insertion.

On the hypothesis that the subjects of unaccusatives are generated in the object position and move up, this suggests that an interaction with the object of a sentence is the cause of the restriction. This all points to a sensitivity of the depictive to aspect, especially when predicated of an entity involved in the computation of aspect. Further investigation into depictives and their interaction with different aspectual structures could reveal more information about the structure of depictives.

5.1.2 Cross-linguistic investigation

Depictives have been studied in a number of different languages that contain features that would be useful for further investigating the relationship of depictives and lexical aspect. For example, the development of a depictive marker in Swiss German (Bucheli Berger, 2005) would be useful in distinguishing depictives from similar constructions. Likewise, Spanish is particularly famous for the *estar/ser* copula distinction, which has been tied to the SLP/ILP distinction. Gumiel-Molina et al. (2016) argue on a similar course for the relevance of the absolute/relative distinction in adjectives to depictive acceptability. However, as we've seen in English, the absolute/relative distinction faces issues with negative members of adjective pairs. Spanish would be a particularly useful comparison in seeing whether this is a more general constraint, or a particular property of English.

Given the focus on lexical aspect in this thesis, we would expect to see depictives differing cross-linguistically as far as the aspectual system of the language differs. A language with richer morphology could reveal facts about the relationship that are obscured by the relative poverty of case in English. In particular, given the relevance of telicity/boundedness, a language with a more overt tie to these distinctions would be very useful in investigating these claims. Finnish, as an example, has a case system that is argued to be reflective of the telicity/boundedness distinction (Kiparsky, 1998). Essessive case is usually used to marked depictives in Finnish, but the translative case can also be used (Nikanne, 1997, 02; Fong, 2003; Pylkkanen, 2008; Leinonen, 2008).

Similarly, Russian would be useful for a further exploration of the relationship between case and depictives. Russian's aspectual system differs significantly from English, and Russian has a richer case morphology, both of which serve as useful testing grounds for the analysis I've presented in this thesis. Russian depictives are also sensitive to boundedness (McKishnie, 2013), but have fewer restrictions on depictives with different verb classes

This difference in aspectual systems has been used before to show a difference between depictive types; Russian depictives show an interesting split between Case Agreement Depictives (CAD), in which the depictive has the same case marking as the entity it is predicated of, and Instrumental Case Marked Depictives (ICMD), in which the depictive is marked with instrumental case (Filip, 2001; Richardson, 2007; Bailyn, 2012).

(6) *Ja zakazala rybu$_i$ syruju$_i$ / syroj$_i$*
I ordered fish-ACC raw-ACC / raw-INSTR

I ordered the fish raw

(Data from Richardson, 2001)

The difference in this case has an effect on the interpretation of sentence:

(7) a. *Vadim vernulsja iz bolnicy zdorovyj*
Vadim-NOM returned from hospital healthy-NOM

Vadim returned from the hospital healthy

b. *Vadim* *vernulsja* *iz* *bolnicy* *zdorovym*
Vadim-NOM returned from hospital healthy-INSTR

Vadim returned from the hospital cured

(Data from Richardson, 2001)

Here, the ICMD is translated as 'cured', indicating that Vadim's state of being healthy had a transition involving the hospital, whereas the CAD is just describing the state of Vadim on his return from the hospital. Russian native speakers show strong pragmatic preferences for using either a CAD or an ICMD over one another for secondary predicates, and usually they entail a difference in interpretation. For example, take:

(8) a. *Ja* *prila* *PRO* *tancevat'* *golaja/goloj*
I-NOM came PRO to-dance naked-NOM/naked-INSTR

'I came to dance naked'

b. *Ja* *poprosila* *ego*$_i$ *PRO*$_i$ *tancevat'* *gologo*$_i$*/golym*$_i$
I-NOM asked him-ACC PRO to-dance naked-ACC/naked-INSTR

'I asked him$_i$ to dance naked$_i$'

(Data from Richardson 2001)

In (8a), agreeing (CAD) and instrumental case (ICMD) have a key semantic difference—for the CAD, the utter of the sentence is merely naked when coming to dance, whereas for the ICMD, the speaker wishes to come specifically to dance naked. Similarly, in (8b), the CAD means that the speaker wants the man to dance as he is (naked), whereas the ICMD means that the speaker wishes the man to get naked and dance. Compare this to English:

(9) a. I$_i$ came to dance naked$_i$

b. I asked him$_i$ to dance naked$_i$

It is difficult for many English speakers to interpret (9b) as asking someone to dance and the person asked to dance was naked at the time. However, we can see that this interpretation shows greater availability when an absolute scale is forced using a scale modifier:

(10) a. (i) I asked John$_i$ to dance naked$_i$
(ii) I asked John$_i$ to dance completely naked$_i$

b. (i) I didn't ask John$_i$ to dance naked$_i$... ??he was clothed at the time
(ii) I didn't ask John$_i$ to dance completely naked$_i$... he was clothed at the time

This raises the question over whether depictives may differ in their aspectual requirements cross-linguistically, or whether they are the same but languages differ in how the aspectual system interacts with them.

5.2 Concluding remarks

In this thesis, I have shown how depictives can be improved in acceptability by introducing formal features that correspond to quantization and durativity. A central question that remains is the role of context and how we can separate linguistic restrictions on acceptability from other issues, like real world knowledge. Certain linguistic items and constructions put limitations on how sentences can be acceptable. For example, a typical split identified by traditional grammarians is between Mass nouns and Count nouns, with the former being predominately identified with substances (e.g. *water, gold*), while the latter is identified with objects (e.g. *dogs, cats*). However, one can use prototypical Mass nouns with Count syntax such as plurals, and this doesn't necessarily result in acceptability. But the use leads to a change of interpretation, and only certain interpretations are allowed:

(11) a. (i) There was water on the table
(ii) There were waters on the table

b. (i) There was a dog on the table
(ii) There was dog on the table

Water in (11ai) can be read either as an amount of water, or a bottle of water, while *water* in (11ai) can be read as bottles/types of water or glasses of water for a group, but it cannot be read as an amount of water as a substance on the table. Conversely, *dog* in (11bi) means a single, whole dog, while (11bii) receives the rather gruesome interpretation of *an amount* of dog (i.e. flesh).

The important point here is that when a lexeme like *dog* or *water* is put in a syntactic frame, it receives the interpretation appropriate to that frame; Mass nouns receive a substance interpretation, while Count nouns receive an object interpretation. This happens regardless of whether it makes sense for that lexeme to be associated with a substance or object reading, and is mostly limited in interpretation by whether a listener is willing to entertain the particular state of affairs that would have to be in order for the sentence to make sense. In essence, not only does the syntactic frame partially determine the interpretation of a lexeme, but a listener understands what sort of context or state of affairs would have to be true in order for the sentence to be acceptable.

We can reverse this line of thought and show that context likewise determines the appropriate sort of syntactic properties required for an acceptable interpretation. By manipulating the context that an utterance is interpreted in, we change the syntactic properties that the sentence has. If a construction requires a particular syntactic property, then this can make an unacceptable sentence acceptable. I use both of these to address depictives, and demonstrate how depictives can be improved in certain contexts, and must be interpreted in certain ways.

This ability to satisfy this restriction through quantization in different domains hints at a larger fact about language. Language grammars have underlying divisions and distinctions in them that surface in various ways, and interact. These properties are part of the constraints put on possible meanings of sentences, but they are often obscured by contextual information and ambiguity. We can see that contextual information and grammatical structure are interdependent, with a degree of variability accorded to both. However, this variability has limits, and understanding these limits

and what heightens or decreases them can lead to a more refined understanding of languages in general.

What I have aimed to show in this thesis is that depictives are a useful construction for exploring the event structure of a language. With their unique semantic and syntactic properties, depictives can reveal important facts about depictives. While much more remains to be done in studying depictives and secondary predicates in general, I hope that the status of and interest in depictives is raised, and that they receive more attention.

Bibliography

Aarts, B. (1992). *Small clauses in English: The nonverbal types*. de Gruyter Mouton.

Aarts, B. (1995). Secondary predicates in English. In B. Aarts & C. F. Meyer (Eds.), *The verb in contemporary English: Theory and description* (pp. 75–101). Cambridge: Cambridge University Press.

Alexiadou, A. (2011). Plural mass nouns and the morpho-syntax of number. *Proceedings of the 28th West Coast Conference on Formal Linguistics*, 33–41.

Alexiadou, A. & Schäfer, F. (2010). There-insertion: an unaccusativity mismatch at the syntax-semantics interface. *Poster presentation at West Coast Conference on Formal Linguistics, 28*.

Andrews, A. (1982). A note on the constituent structure of adverbials and auxiliaries. *Linguistic Inquiry*, 313–317.

Asada, Y. (2012). Against the complex predicate analysis of secondary predication. *Proceedings of ConSOLE xviii*, 53–76.

Bach, E. (1980). In defense of passive. *Linguistics and Philosophy, 3*(3), 297–341.

Bach, E. (1986). The algebra of events. *Linguistics and Philosophy, 9*(1), 5–16.

Bailyn, J. F. (2012). *The syntax of Russian*. Cambridge: Cambridge University Press.

Beavers, J. (2002). *Aspect and the distribution of prepositional resultative phrases in English*. Unpublished MS. Stanford University.

Beavers, J. (2008). Scalar complexity and the structure of events. In J. Dolling, M. Schafer, & T. Heyde-Zybatow (Eds.), *Event Structures in Linguistic Form and Interpretation* (pp. 245–265).

Bierwisch, M. (1989). The semantics of gradation. In E. Lang (Ed.), *Dimensional adjectives* (Vol. 71, p. 261). Berlin Heidelberg: Springer-Verlag.

Bolinger, D. L. M. (1971). *The phrasal verb in English*. Cambridge, Massachusetts: Harvard University Press.

Borer, H. (2005a). *Structuring Sense: In name only*. Oxford University Press.

Borer, H. (2005b). *Structuring Sense: The normal course of events*. Oxford University Press.

Borer, H. (2013). *Structuring Sense: Taking form*. Oxford University Press.

Bowers, J. (1993). The syntax of predication. *Linguistic Inquiry, 24*(4), 591–656.

Bowers, J. (2001). Predication. In M. Baltin & C. Collins (Eds.), *The Handbook of Contemporary Syntactic Theory* (pp. 299–333).

Bruening, B. (2015). *Depictive Secondary Predicates, Light Verb Give, and Theories of Double Object Constructions*. Unpublished MS.

Bucheli Berger, C. (2005). Depictive agreement and the development of a depictive marker in Swiss German dialects. In N. P. Himmelmann & E. Schultze-Berndt (Eds.), *Secondary Predication and Adverbial Modification: The Typology of Depictives* (pp. 141–172).

Carlson, G. N. (1977). *Reference to kinds in English* (PhD Thesis, University of Massachusetts, Amherst).

Carrier, J. & Randall, J. (1992). The argument structure and syntactic structure of resultatives. *Linguistic Inquiry*, 173–234.

Cheng, C.-Y. (1973). Response to Moravcsik. In J. Hintikka (Ed.), *Approaches to Natural Language* (pp. 286–288). D. Reidel Publishing.

Chierchia, G. (1995). Individual level predicates as inherent generics. In J. van Eijck, G. N. Carlson, & F. J. Pelletier (Eds.), *The Generic Book* (pp. 176–223). Chicago University Press.

Chomsky, N. (1957). *Syntactic structures*. The Hague: Mouton.

Chomsky, N. (1981). *Lectures on government and binding*. Dordrecht: Foris.

Chomsky, N. (1994). *Bare phrase structure*. Cambridge, Massachusetts: MIT Press.

Cinque, G. (1999). *Adverbs and functional heads: A cross-linguistic perspective*. Oxford University Press.

Condoravdi, C. (1992). *Individual-level predicates in conditional clauses*. Talk given at the LSA Annual Meeting. Philadelphia, PA.

Cormack, A. & Smith, N. (1999). Why are depictives different from resultatives. *Working Papers in Linguistics*, *11*, 251–284.

Cruse, D. A. (1986). *Lexical semantics*. Cambridge University Press.

Culicover, P. W. & Rochemont, M. S. (1990). Extraposition and the complement principle. *Linguistic Inquiry*, *21*(1), 23–47.

Culicover, P. W. & Wilkins, W. K. (1984). *Locality in linguistic theory*. New York: Academic Press.

Dechaine, R.-M. A. (1993). *Predicates across categories: Towards a category-neutral syntax* (PhD Thesis, University of Massachusetts, Amherst).

Demonte, V. (1987). Remarks on secondary predicates: c-command, extraction, and reanalysis. *The Linguistic Review*, *6*(1), 1–40.

Demonte, V. (1991). Temporal and aspectual constraints on predicative adjective phrases. *Current Studies in Spanish Linguistics. Washington, DC: Georgetown University Press*, 165–200.

Demonte, V. (2011). Adjectives. In K. von Heusinger, C. Maienborn, & P. Portner (Eds.), *Semantics: An International Handbook of Natural Language Meaning* (Vol. 2, pp. 1314–1340).

Diesing, M. (1992). *Indefinites*. Cambridge, Massachusetts: MIT Press.

Doetjes, J. (1997). *Quantifiers and selection. On the distribution of quantifying expressions in French, Dutch and English* (PhD Thesis, Leiden University).

Dowty, D. (1972). Temporally restricted predicates. In J. Kimball (Ed.), *Syntax and Semantics* (Vol. 1, pp. 51–62).

Dowty, D. (1979). *Word Meaning and Montague Grammar: The Semantics of Verbs and Times in Generative Semantics and in Montague's PTO*. Reidel.

Ernst, T. (2002). *The syntax of adjuncts*. Cambridge University Press.

Erteschik-Shir, N. & Rapoport, T. R. (1997). A theory of verbal projection. *Interfaces in Linguistic Theory*, 129–148.

Fernald, T. (2000). *Predicates and Temporal Arguments*. Cary, GB: OUP Oxford.

Filip, H. (2001). The semantics of case in Russian secondary predication. *Semantics and Linguistic Theory*, *11*, 192–211.

Fong, V. (2003). Resultatives and depictives in Finnish. In D. Nelson & S. Manninen (Eds.), *Generative Approaches to Finnic and Saami Linguistics*. CSLI.

Geuder, W. (2000). *Oriented Adverbs: Issues in the Lexical Semantics of Event Adverbs* (PhD Thesis, Universität Tübingen).

Goldberg, A. E. (1995). *Constructions: A construction grammar approach to argument structure*. University of Chicago Press.

Green, G. M. (1973). A syntactic syncretism in English and French. In B. Kachru, R. Lees, Y. Malkiel, A. Pietrangeli, & S. Saporta (Eds.), *Issues in Linguistics: Papers in Honor of Henry and Renée Kahane* (pp. 257–278). University of Illinois Press.

Grimshaw, J. (1990). *Argument structure*. Cambridge, Massachusetts: MIT Press.

Gueron, J. & Hoekstra, T. (1995). The temporal interpretation of predication. In A. Cardinaletti & M. T. Guasti (Eds.), *Syntax and semantics* (Vol. 28, pp. 77–107).

Gumiel-Molina, S., Moreno-Quibén, N., & Pérez-Jiménez, I. (2016). Depictive secondary predicates in Spanish and the relative/absolute distinction. In *Romance Linguistics 2013: Selected papers from the 43rd Linguistic Symposium on Romance Languages (LSRL), New York, 17-19 April, 2013* (Vol. 9, p. 139). John Benjamins Publishing Company.

Hale, K. & Keyser, S. J. (1993). On argument structure and the lexical expression of syntactic relations. In K. Hale, S. J. Keyser, & S. Bromberger (Eds.), *The View from Building 20*. MIT Press.

Hale, K. & Keyser, S. J. (1998). The basic elements of argument structure. *MIT Working Papers in Linguistics*, *32*, 73–118.

Halliday, M. A. K. (1967). *Intonation in the Grammar of English*. The Hague: Mouton.

Hay, J., Kennedy, C., & Levin, B. (1999). Scalar structure underlies telicity in Degree achievements. In *Semantics and linguistic theory* (Vol. 9, pp. 127–144).

Heim, I. (1982). *The semantics of definite and indefinite noun phrases* (PhD Thesis, University of Massachusetts).

Heim, I. & Kratzer, A. (1998). *Semantics in generative grammar*. Oxford: Blackwell.

Higginbotham, J. & Ramchand, G. (1997). The stage-level/individual-level distinction and the mapping hypothesis. *Oxford University Working Papers in Linguistics, Philology and Phonetics*, *2*, 55–83.

Himmelmann, N. P. & Schultze-Berndt, E. (2005). Issues in the Syntax and Semantics of Participant-Oriented Adjuncts: An Introduction. In N. P. Himmelmann & E. Schultze-Berndt (Eds.), *Secondary Predication and Adverbial Modification: The Typology of Depictives* (pp. 1–67). Oxford University Press.

Hoekstra, T. (1988). Small clause results. *Lingua*, *74*, 101–139.

Hornstein, N. & Lightfoot, D. (1987). Predication and PRO. *Language*, 23–52.

Husband, E. M. (2012). *On the compositional nature of states*. John Benjamins Publishing.

Ike-Uchi, M. (1990). On extraction of secondary predicates in English. *MIT Working Papers in Linguistics*, *13*, 125–162.

Irimia, M. (2012). *Secondary predication* (PhD Thesis, University of Toronto).

Isac, D. (2005). Depictives: Syntactic and Interpretive Asymmetries. In A. M. Di Sciullo (Ed.), *UG and External Systems: Language, Brain and Computation* (pp. 3–26).

Jackendoff, R. (1972). *Semantic Interpretation in Generative Grammar*. Cambridge, Massachusetts: MIT Press.

Jackendoff, R. (1977). *X-Bar Syntax*. Cambridge, Massachusetts: MIT Press.

Jackendoff, R. (1990). *Semantic structures*. Cambridge, Massachusetts: MIT Press.

Jäger, G. (1996). The stage/individual contrast revisited. *Proceedings of WCCFL 15*.

Jäger, G. (1999). Stage levels, states, and the semantics of the copula. *ZAS Papers in Linguistics*, *14*, 65–94.

Jäger, G. (2001). Topic-Comment Structure and the Contrast Between Stage Level and Individual Level Predicates. *Journal of Semantics*, *18*(2), 83–126.

Jespersen, O. (1954). *A modern English grammar on historical principles*. Routledge.

Kayne, R. S. (1994). *The antisymmetry of syntax*. Cambridge, Massachusetts: MIT Press.

Kearns, K. (2000). *Semantics*. New York: St Martin's Press.

Kennedy, C. (2007). Vagueness and grammar: The semantics of relative and absolute gradable adjectives. *Linguistics and Philosophy*, *30*(1), 1–45.

Kennedy, C. & Levin, B. (2008). Measure of change: The adjectival core of degree achievements. In L. McNally & C. Kennedy (Eds.), *Adjectives and adverbs: Syntax, semantics and discourse* (pp. 156–182).

Kennedy, C. & McNally, L. (2005). Scale structure, degree modification, and the semantics of gradable predicates. *Language*, 345–381.

Kiparsky, P. (1998). Partitive case and aspect. *The projection of arguments: Lexical and compositional factors*, *265*, 307.

Koizumi, M. (1994). Secondary predicates. *Journal of East Asian Linguistics*, *3*(1), 25–79.

Koizumi, N. (1996). The Stage-Level Restriction and the Peculiar Status of Depictive Predicates. *English Linguistics*, *13*, 121–139.

Kratzer, A. (1995). Stage-level and individual-level predicates. In J. van Eijck, G. N. Carlson, & F. J. Pelletier (Eds.), *The Generic Book* (pp. 125–175). Chicago: University of Chicago Press.

Kratzer, A. (1996). Severing the external argument from its verb. In J. Rooryck & L. Zaring (Eds.), *Phrase structure and the Lexicon* (pp. 109–137). Springer.

Krifka, M. (1989). Nominal reference, temporal constitution and quantification in event semantics. *Semantics and contextual expression*, *75*, 115.

Krifka, M. (1992). Thematic relations as links between nominal reference and temporal constitution. In I. Sag & A. Szabolcsi (Eds.), *Lexical matters*.

Krifka, M. (1998). The origins of telicity. In S. Rothstein (Ed.), *Events and grammar* (pp. 197–235). Dordrecht: Kluwer.

Krifka, M., Pelletier, F. J., Carlson, G. N., Chierchia, G., Link, G., & ter Meulen, A. (1995). Introduction to genericity. In J. van Eijck, G. N. Carlson, & F. J. Pelletier (Eds.), *The Generic Book* (pp. 1–124).

Lakoff, G. & Ross, J. R. (1976). Why you can't do so into the sink. In J. McCawley (Ed.), *Syntax and semantics* (Vol. 7, pp. 101–111).

Landau, I. (2013). *Control in generative grammar: A research companion*. Cambridge University Press.

Larson, R. K. (1988a). Light predicate raising. *MIT Lexicon Project Working Papers*, *27*.

Larson, R. K. (1988b). On the double object construction. *Linguistic Inquiry*, *19*(3), 335–391.

Larson, R. K. (2004). Sentence-Final Adverbs and "Scope". *Proceedings of NELS*, *34*, 23–44.

Lassiter, D. (2010). Gradable epistemic modals, probability, and scale structure. *Semantics and Linguistic Theory*, *20*, 197–215.

Lassiter, D. (2011). *Measurement and modality: The scalar basis of modal semantics* (PhD Thesis, NYU).

Leinonen, M. (2008). Depictive secondary predicates in Finnish. In C. Schroeder, G. Hentschel, & W. Boeder (Eds.), *Secondary Predicates in Eastern European Languages and Beyond*. BIS Verlag.

Levin, B. (1993). *English verb classes and alternations: A preliminary investigation*. University of Chicago Press.

Levin, B. & Hovav, M. R. (1995). *Unaccusativity: At the syntax-lexical semantics interface*. MIT Press.

Lewis, D. (1975). Adverbs of quantification. In E. Keenan (Ed.), *Formal semantics of natural language* (pp. 3–15). Cambridge: Cambridge University Press.

Link, G. (1983). The Logical Analysis of Plurals and Mass Terms: A Lattice-Theoretic Approach. In R. Bauerle, C. Schwartze, & A. von Stechow (Eds.), *Meaning, use and interpretation of language*. Berlin: Mouton de Gruyter.

Maienborn, C. (2011). Event semantics. In C. Maienborn, K. von Heusinger, & P. Portner (Eds.), *Semantics: An International Handbook of Natural Language Meaning* (Vol. 1, pp. 802–830). Berlin: Mouton de Gruyter.

Maling, J. (2001). Dative: The heterogeneity of the mapping among morphological case, grammatical functions, and thematic roles. *Lingua*, *111*(4), 419–464.

Maruta, T. (1995). The Semantics of Depictives. *English Linguistics*, *12*, 125–146.

McKishnie, A. (2013). *Depictives and Wh-Movement of Depictives in East Slavic* (Master's Thesis, University of Victoria).

McNally, L. (1994). Adjunct predicates and the individual/stage distinction. *Proceedings of WCCFL*, *12*, 561–576.

McNally, L. (1998). Existential sentences with existential quantification. *Linguistics and Philosophy*, *21*(4), 353–392.

McNally, L. (2009). The relative role of property type and scale structure in explaining the behavior of gradable adjectives. In R. Nouwen, R. Van Rooij, U. Sauerland, & H.-C. Schmitz (Eds.), *Vagueness in Communication* (pp. 151–168).

McNulty, E. M. (1988). *The syntax of adjunct predicates* (PhD Thesis, University of Connecticut).

Milsark, G. L. (1974). *Existential sentences in English* (PhD Thesis, Massachusetts Institute of Technology).

Milsark, G. L. (1977). Toward an explanation of certain peculiarities of the existential construction in English. *Linguistic Analysis*, *3*, 1–30.

Miyamoto, Y. (1994). *Secondary predicates and tense*.

Morzycki, M. (2015). *Modification*. Cambridge University Press.

Motut, A. (2010). A puzzle for the syntax-semantics of depictives. *Proceedings of the Canadian Linguistics Association*.

Motut, A. (2014). A Semantics for Object-Oriented Depictives. *University of Pennsylvania Working Papers in Linguistics*, *20*(1), 26.

Müller-Bardey, T. (2005). Adverbials and depictives as restrictors. *Secondary Predication and Adverbial Modification: The Typology of Depictives*, 107–140.

Nakajima, H. (1990). Secondary predication. *Linguistic Review*, *7*(3), 275–309.

Napoli, D. J. (1989). *Predication theory: a case study for indexing theory.* Cambridge University Press.

Nichols, J. (1978). Secondary predicates. *Annual Meeting of the Berkeley Linguistics Society*, *4*, 114–127.

Nikanne, U. (1997). Locative case adjuncts in Finnish: Notes on syntactico-semantic interface. *Nordic Journal of Linguistics*, *20*, 155–178.

Ogawa, Y. (2001). The Stage/Individual Distinction and (In)alienable Possession. *Language*, *77*(1), 1–25.

Ojeda, A. E. (2005). The paradox of mass plurals. In S. Mufwene, E. Francis, & R. Wheeler (Eds.), *Polymorphous Lingustics: Jim McCawleys Legacy (Eds.) Mufwene, E. F. and Wheeler, R. S.,* Cambridge, Massachusetts: MIT Press.

Olsen, M. B. (1997). *A semantic and pragmatic model of lexical and grammatical aspect.* New York: Garland.

Ott, D. (2010). Grammaticality, interfaces, and UG. In M. Putnam (Ed.), *Exploring crash-proof grammars* (pp. 89–104).

Pelletier, F. J. (2010). Descriptive metaphysics, natural language metaphysics, Sapir-Whorf, and all that stuff: Evidence from the mass-count distinction. *Baltic International Yearbook of Cognition, Logic and Communication*, *6*(1), 7.

Pylkkanen, L. (2008). *Introducing arguments.* Cambridge, Massachusetts: MIT Press.

Quine, W. V. O. (1960). *Word and object.* Cambridge, Massachusetts: MIT Press.

Randall, J. (1982). A lexical approach to causatives. *Journal of Linguistic Research*, *2*(3), 77–105.

Rapoport, T. R. (1991). Adjunct-predicate licensing and D-structure. In S. Rothstein (Ed.), *Syntax and semantics* (Vol. 25). New York: Academic Press.

Rapoport, T. R. (1993a). Stage and adjunct predicates: Licensing and structure in secondary predication constructions. In E. Reuland & W. Abraham (Eds.), *Knowledge and Language: Lexical and Conceptual Structure* (Vol. 2, pp. 157–182). Springer.

Rapoport, T. R. (1993b). Verbs in depictives and resultatives. In J. Pustejovsky (Ed.), *Semantics and the Lexicon* (pp. 163–184). Springer.

Rapoport, T. R. (1999). Structure, aspect, and the predicate. *Language*, 653–677.

Richardson, K. (2001). What secondary predicates in Russian tell us about the link between tense, aspect and case. *ZAS Papers in Linguistics*, *26*, 1–25.

Richardson, K. (2007). *Case and aspect in Slavic.* Oxford: Oxford University Press.

Roberts, I. (1988). Predicative APs. *Linguistic Inquiry*, *19*(4), 703–710.

Rochemont, M. S. & Culicover, P. W. (1990). English focus constructions and the theory of grammar. *Cambridge studies in linguistics*, (52), 1–210.

Rothstein, S. (1983). *The syntactic forms of predication* (PhD Thesis, Massachusetts Institute of Technology).

Rothstein, S. (2001). *Predicates and their subjects.* Springer Science & Business Media.

Rothstein, S. (2003). Secondary predication and aspectual structure. In E. Lang, C. Maienborn, & C. Fabricius-Hansen (Eds.), *Modifying Adjuncts.* The Hague: Walter de Gruyter.

Rothstein, S. (2004). *Structuring events: A study in the semantics of aspect.* John Wiley & Sons.

Rothstein, S. (2006). Secondary predication. *The Blackwell companion to syntax*, 209–233.

Rothstein, S. (2011). Secondary predicates. In K. von Heusinger, C. Maienborn, & P. Portner (Eds.), *Semantics: An International Handbook of Natural Language Meaning (Vol. 2)* (pp. 1142–1662). Berlin: Mouton de Gruyter.

Rotstein, C. & Winter, Y. (2004). Total adjectives vs. partial adjectives: Scale structure and higher-order modifiers. *Natural Language Semantics*, *12*(3), 259–288.

Safir, K. (1987). The syntactic projection of lexical thematic structure. *Natural Language & Linguistic Theory*, *5*(4), 561–601.

Sassoon, G. W. (2012). A typology of multidimensional adjectives. *Journal of Semantics*.

Schein, B. (1995). Small clauses and predication. In A. Cardinaletti & M. T. Guasti (Eds.), *Small Clauses* (Vol. 28, pp. 49–76). New York: Academic Press.

Schultze-Berndt, E. & Himmelmann, N. P. (2004). Depictive secondary predicates in crosslinguistic perspective. *Linguistic Typology*, *8*(1), 59–131.

Simpson, J. (1983). *Aspects of Warlpiri morphology and syntax* (PhD Thesis, MIT).

Simpson, J. (2005). Depictives in English and Warlpiri. In N. P. Himmelmann & E. Schultze-Berndt (Eds.), *Secondary Predication and Adverbial Modification; The Typology of Depictives* (pp. 69–106). Oxford University Press.

Smith, C. S. (1991). *The parameter of aspect*. Springer Science & Business Media.

Stroik, T. (1992). Middles and movement. *Linguistic Inquiry*, *23*(1), 127–137.

Stump, G. (1985). *The semantic variability of absolute constructions*. Springer Science & Business Media.

Tenny, C. L. (1994). *Aspectual roles and the syntax-semantics interface*. Springer.

Travis, L. (2010). *Inner aspect*. Springer.

Truswell, R. (2007). Extraction from adjuncts and the structure of events. *Lingua*, *117*(8), 1355–1377.

Tsuzuki, M. (1988). Depictive Secondary Predicates versus Conditional Secondary Predicates. *English Linguistics*, *5*, 71–90.

Unger, P. (1971). A defense of skepticism. *The Philosophical Review*, 198–219.

Unger, P. (1975). *Ignorance: A case for scepticism*. Oxford University Press.

Verkuyl, H. J. (1993). *A theory of aspectuality: The interaction between temporal and atemporal structure*. Cambridge University Press.

Verkuyl, H. J. (2005). Aspectual composition: Surveying the ingredients. In H. J. Verkuyl, H. De Swart, & A. van Hout (Eds.), *Perspectives on aspect* (pp. 19–39). Springer.

von Fintel, K. (1994). *Restrictions on quantifier domains* (PhD Thesis, University of Massachusetts, Amherst).

Wechsler, S. (2005). Resultatives under the Event-Argument Homomorphism Model of Telicity. In N. Erteschik-Shir & T. R. Rapoport (Eds.), *The Syntax of Aspect* (pp. 255–273).

Williams, E. (1975). Small clauses in English. In J. Kimball (Ed.), *Syntax and semantics* (Vol. 4, pp. 249–273). New York: Academic Press.

Williams, E. (1980). Predication. *Linguistic Inquiry*, *11*(1), 203–238.

Winkler, S. (1997). *Focus and secondary predication*. Walter de Gruyter.

Wunderlich, D. (1997). Argument extension by lexical adjunction. *Journal of Semantics*, *14*(2), 95–142.

Wyngaerd, G. V. (2001). Measuring events. *Language*, 61–90.

Wyngaerd, G. V. (2012). The Boundedness Distinction in Adjectives. *The 45th Annual Meeting of the Societas Linguistica Europaea, University of Stockholm.*

Yoon, Y. (1996). Total and partial predicates and the weak and strong interpretations. *Natural Language Semantics*, *4*(3), 217–236.

Zagona, K. (1988). Proper government of antecedentless VP in English and Spanish. *Natural Language & Linguistic Theory*, *6*(1), 95–128.

Author/s:
Farrell, Jake Andrew

Title:
Depictive secondary predication and quantization

Date:
2017

Persistent Link:
http://hdl.handle.net/11343/176330